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FINANCING THE 90s

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Too much debt. Too many bad loans. Too much unneeded real estate. The excesses of the 1980s have damaged many of our financial institutions and corporations. Now comes the cleanup—and with it, an era of weak demand, reluctance to lend, perhaps even deflation. Ultimately, a revitalized financial system will emerge, with more rational standards, values, and goals. In this Special Report, Business Week examines the much-needed shift from speculation to sanity—and how it will affect nearly everyone. PAGE 112

SPECIAL REPORT

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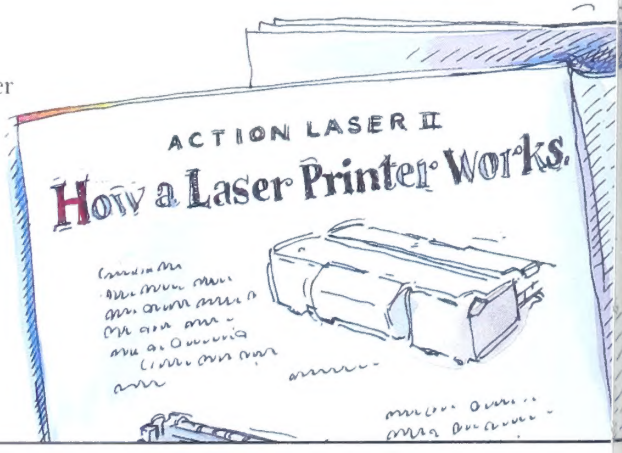

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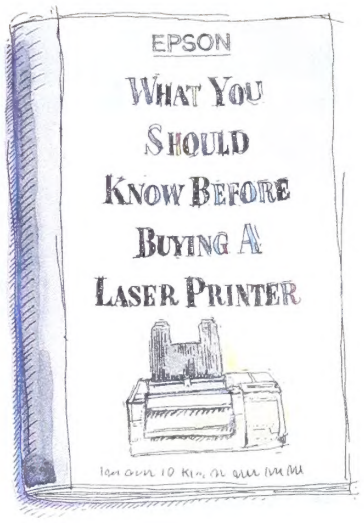

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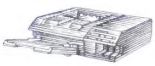
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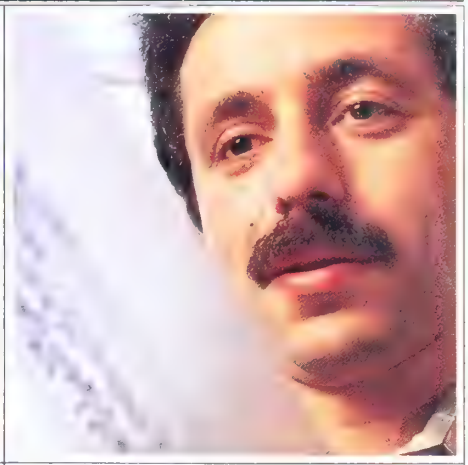

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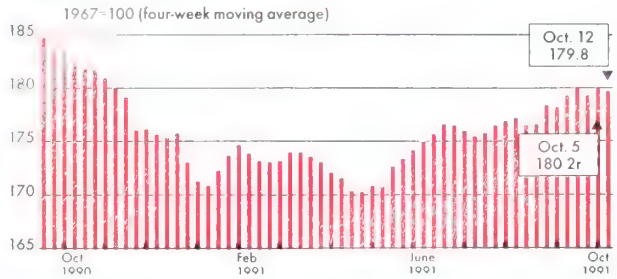
BusinessWeek Index

PRODUCTION

Change from last week: −0.2%
Change from last year: 1.6%

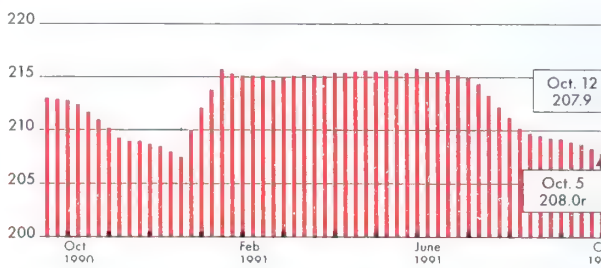


The production index declined slightly during the week ended Oct. 12. On a seasonally adjusted basis, production of trucks, steel, electric power, crude-oil refining, and lumber all decreased. Rail-freight traffic, autos, coal, and paper output increased, while paperboard production was unchanged from the previous week. Before calculation of the four-week moving average, the index stood at 180, unchanged from the level of the week before.

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: −0.0%
Change from last year: −2.2%



The leading index fell during the week ended Oct. 12. The continued decline the index suggests that the economy will struggle through the fourth quarter and i 1992. Falling stock prices, rising bond yields, and a decline in real estate loans o the positive signs of a sharp drop in the number of business failures, and impro growth in materials prices and the money supply. Before calculation of the four-w moving average, the index increased to 208.1, from 207.2 in the previous week.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (10/19) thous. of net tons	1,682	1,655r#	−9.7
AUTOS (10/19) units	136,107	118,352r#	4.5
TRUCKS (10/19) units	88,984	77,027r#	16.7
ELECTRIC POWER (10/19) millions of kilowatt-hours	52,315	52,854#	1.6
CRUDE-OIL REFINING (10/19) thous. of bbl./day	12,994	13,296#	1.8
COAL (10/12) thous. of net tons	19,955#	19,291	3.4
PAPERBOARD (10/12) thous. of tons	795.2#	800.7r	6.4
PAPER (10/12) thous. of tons	761.0#	756.0r	−1.3
LUMBER (10/12) millions of ft.	501.0#	508.0	6.2
RAIL FREIGHT (10/12) billions of ton-miles	21.3#	21.2	2.9

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (10/23)	131	130	128
GERMAN MARK (10/23)	1.70	1.70	1.52
BRITISH POUND (10/23)	1.71	1.71	1.96
FRENCH FRANC (10/23)	5.82	5.80	5.08
CANADIAN DOLLAR (10/23)	1.13	1.13	1.17
SWISS FRANC (10/23)	1.48	1.49	1.28
MEXICAN PESO (10/23)[3]	3,052	3,052	2,912

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars.

PRICES

	Latest week	Week ago	% Change year ago
GOLD (10/23) $/troy oz.	362.200	356.550	−2.4
STEEL SCRAP (10/22) #1 heavy, $/ton	97.00	97.00	−12.2
FOODSTUFFS (10/21) index, 1967=100	207.4	209.7	−2.9
COPPER (10/19) ¢/lb	110.3	111.9	−14.0
ALUMINUM (10/19) ¢/lb.	53.0	51.2	−36.5
WHEAT (10/19) #2 hard, $/bu.	3.60	3.54	31.9
COTTON (10/19) strict low middling 1-1/16 in., ¢/lb	58.13	58.58	−15.8

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market.

LEADING INDICATORS

	Latest week	Week ago	% Ch year
STOCK PRICES (10/18) S&P 500	390.74	379.80	
CORPORATE BOND YIELD, Aaa (10/18)	8.54%	8.50%	–
INDUSTRIAL MATERIALS PRICES (10/18)	96.8	96.3	
BUSINESS FAILURES (10/11)	329	466	
REAL ESTATE LOANS (10/9) billions	$396.5	$396.3	
MONEY SUPPLY, M2 (10/7) billions	$3,400.4	$3,393.3r	
INITIAL CLAIMS, UNEMPLOYMENT (10/5) thous.	423	436	

Sources: Standard & Poor's, Moodys, *Journal of Commerce* (index: 1980=100), D Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonal justs data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Ch yea
CONSUMER PRICE INDEX (Sept.)	137.2	136.6	
HOUSING STARTS (Sept.) annual rate, thous	1,033	1,056r	
INDUSTRIAL PRODUCTION (Sept.) total index	108.1	108.0r	
CAPACITY UTILIZATION (Sept.)	79.7%	79.8%r	

Sources: BLS, Commerce Dept., Federal Reserve Board

MONETARY INDICATORS

	Latest week	Week ago	% Ch yea
MONEY SUPPLY, M1 (10/7)	$875.8	$875.1r	
BANKS' BUSINESS LOANS (10/9)	298.5	300.0	
FREE RESERVES (10/16)	880	702r	
NONFINANCIAL COMMERCIAL PAPER (10/9)	135.3	135.0	

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	
FEDERAL FUNDS (10/22)	5.25%	5.58%	7
PRIME (10/23)	8.00	8.00	10
COMMERCIAL PAPER 3-MONTH (10/22)	5.34	5.34	8
CERTIFICATES OF DEPOSIT 3-MONTH (10/23)	5.34	5.27	8
EURODOLLAR 3-MONTH (10/19)	5.33	5.33	8

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart), other components (estimated and not listed) include machinery and defense equip
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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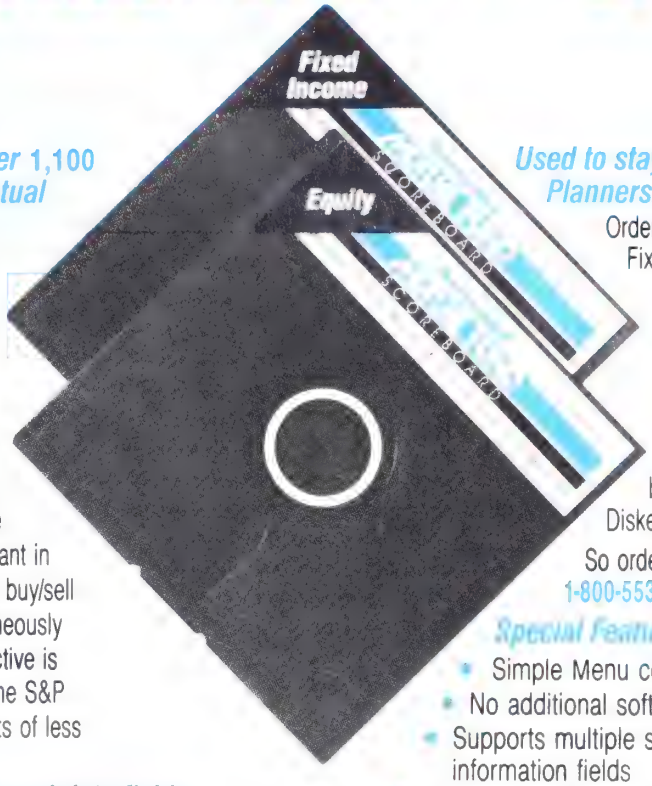

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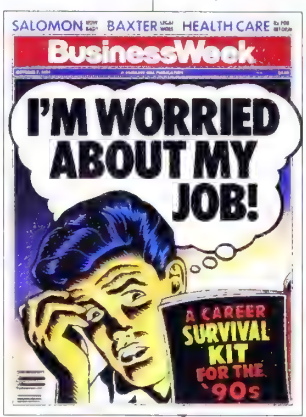
Readers Report

JOB JITTERS SHOULD MAKE BUSINESS NERVOUS, TOO

In regard to your articles "I'm worried about my job!" and "A career survival kit" (Cover Story, Oct. 7): Approximately 10 years ago I had the opportunity, firsthand, to experience an LBO and the resultant downsizing in personnel and shift of corporate policies away from employees and toward the bottom line.

The changes in the workplace and in the relationship between employee and employer, as indicated in your article, are becoming profound. The next round of changes will be equally drastic in that benefits once provided, however grudgingly, by employers—retirement and savings plans, health insurance both at work and into retirement, child care, leave policies, and other forms of compensation—will, increasingly, have to be social benefits that government will provide. One suspects that business will, in all likelihood, bear the bulk of the financial burden for these costs.



I am concerned that the traditional relationship between employer and employee has so eroded. If your articles are correct, we in this country will soon become a nation of itinerant workers as people shift, industrially and geographically, from place to place to seek the highest compensation and best opportunities.

In a "free" marketplace, such as this scenario presumes, there are, inevitably, winners and losers, and with the talent being drawn to the greatest opportunities in prosperous industries (keeping in mind that compensation has now become virtually the sole determinant of employee loyalty and productivity), those industries either slumping or weakened by foreign or other competition will, in all likelihood, disappear permanently. One could also expect to see, in the wake of all this, a resurgence in trade unionism for professionals, perhaps dubbed "associations" or "societies" so as not to offend the sensibilities of the professional members but nevertheless functioning as unions.

Geoffrey K. Wasch
Plymouth, Mic

Your story is an excellent remind of how our nation's business h evolved over the past few decades. our corporations can no longer provide sense of long-term security to dilige employees, the long-term profitability many of America's corporations could in serious jeopardy.

W. A. Rossetter
Yorba Linda, Cal

With too few exce tions, U. S. comp nies have merely paid service to the oft-abus line, "human resourc are our most importa asset." Unfortunately, u til the upper tiers of o organizations begin better demonstrate a articulate vision and dire tion throughout their ganizations, productivity improvemen and innovation will fall short, midd management will remain on the cho ping block, and we will continue bemoa ing the U. S.'s "lack of competitiveness

Rod Manu
Denv

As one who has been "downsized," can identify with both stories.

My trouble is, I was raised in an era which one was taught to be loyal one's employer and to do the best j one can do. I did that as I spent over years with one employer. I endured t selling off of the industrial produc companies, the Chapter 11 proceeding and the many due-diligence visits by pr spective suitors—all the while spurni inquiries by headhunters in the misgu ed belief that loyalty counted and it w my responsibility to stay and help turn the business around.

When the company was acquired an investment banking firm in Septe ber, 1991, I redoubled my effort to duce our costs and to develop a ve cost-effective and highly efficient mar

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'Dad always wanted to celebrate 'Thanksgiving the way the 'Pilgrims did

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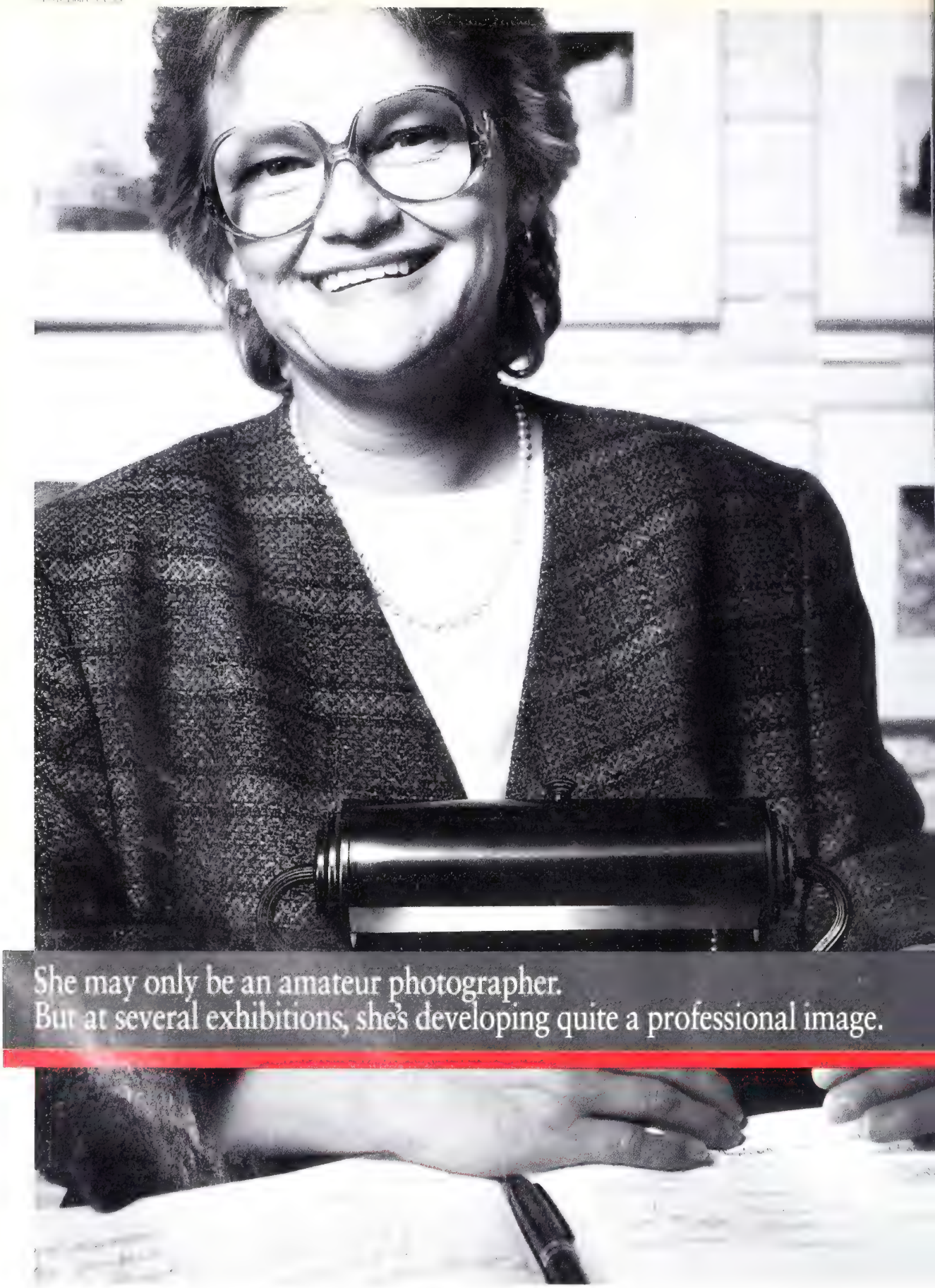

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For Lynn Drilling of Amherst, N.Y., raising a family has been the most rewarding part of her life. But recently, Lynn's own creative pursuits have been reaping rewards as well. In fact, as an amateur photographer, her work has been displayed at several exhibitions in the Northeast.

And while Lynn Drilling has been developing her photographic skills, Canon has been at her side. Because with her simple and easy to use Canon EOS Rebel, Lynn can concentrate on turning ordinary subjects into works of art–works that someday she hopes to publish.

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facturing operation. I spent many 70- and 80-hour weeks and traveled frequently to our plants, and I succeeded quite well.

What did I get for my efforts? A lost job when the new owners combined seven companies into three and decided that someone who had spent the bulk of his career in human resources could not possibly know enough to effectively run an operations function. I have raised my two boys in the same manner in which I was raised and tried to teach them the values of doing one's best and being loyal to their employer. They now ask me why they should be loyal and I, frankly, did not have an answer for them. However, thanks to your articles, I can now give them an answer. Be loyal to yourself only, for that's all U. S. businesses apparently value these days.

William J. West
Hendersonville, Tenn.

Like it or not, American employers and employees have collaborated since the 1950s—with a combination of confrontational union activism, career-development job-hopping, and LBO-driven corporate restructurings—to construct an ethic of employment nomadism that is now visible in the 1990s as a new standard.

I speak with hundreds of job-seekers every month, most of them already in the situation of having to find a new position. Unfortunately, far too many have yet to absorb BUSINESS WEEK's career planning recommendations.

Sacrifice may be involved in lifestyle (disposable income, location—or both) and in prior expectations about what one will do for a living. But if it contributes to reshaping this nation into a leaner and more focused economic competitor, then free-market forces once again may be preparing us well for prosperity in the next century.

Howard C. Mueller
South Bend, Ind.

What happens when the blue-collar worker starts reading these kinds of articles? Realizing how little trust corporate officers have in their employment longevity, will not the labor sector have even fewer reasons to take pride in their work and their company?

J. Douglas Marshall
Seattle

In the good old days, when we workers were incidentally making the U. S. famous, we did so by working to further the goals of our company—and incidentally furthered our own.

Sure, I get a kick out of the fact that my first boss (55 years ago) is still a friend and the company is still a world leader, because we employees worked hard to make it so.

No wonder we old timers feel that the business world has changed for the worse—it has. Employees are out to get better breaks for themselves and t job, and the customer comes dead la After the Depression we worked hard get the job done. After this little "rec sion," let's hope the world changes ba again.

Walter H. Carnah
Rochester, N.

Your concept of the itinerant mana er encourages self-reliance and fers independence, but it won't preve talented people from worrying abo their jobs. Where will these lone range ride off to after completing their temp rary assignments? On to the next tow This wandering will test the loyalty the faithful companion, who has a m sion of his or her own.

Corporations have eliminated jobs b cause of fierce competition and risi costs, but they should closely evalua the impact of downsizing on loyal e ployees, not just on the bottom line.

It is too soon for companies to aba don employee involvement and particip tive management as ways to solve the problems.

Assuming prosperity returns, the be people will flock to the companies th tried to preserve a reasonable quality life for their dedicated employees.

James V. O'Conn
Northbrook, I

Just when American corporations ne strong leadership most, you encou age middle and upper management to prepared to jump at the first sign water. I was deeply disappointed th BUSINESS WEEK would endorse such view. Has not the propensity to thi only of the short term gotten us where we are today?

What American industry needs now managers who can lead, who know the business and their customers, anticipa needs, and be able to deliver produc and services to meet those needs fast and cheaper and of higher quality tha the competition.

James D. Ha
Cincinna

Yes, I agree with you that each of has to continuously improve ou selves, build skills, and network. But n with a view to getting a better job—wi a view to doing the best we can even the current position.

Madhavi B. Solthr
Beaumont, Te

Letters to the Editor should be sent to Reade Report, Business Week, 1221 Avenue of the Ame cas, New York, N. Y. 10020. Fax: (212) 512-446 Telex: 12-7960, Intl. 4998204. All letters must i clude an address and daytime and evening te phone numbers. We reserve the right to edit lette for clarity and space.

JOHN L. COBBS, 1917-1991

For almost two-thirds of BUSINESS WEEK's 62-year history, John L. Cobbs brought distinction to its editorial staff. Armed with a magna cum laude BA and an MA from Stanford University, he started his long career during World War II in Washington—a base from which he helped our readers penetrate the mysteries of such matters as wage and price controls. Moving to New York, he advanced to such posts as finance editor, business policy editor, and managing editor. From 1969 until his retirement in 1982, he held the title of editor, presiding over the editorial page with grace, wisdom, and wit.

COBBS: A MASTER OF LANGUAGE AND LOGIC

John Cobbs was a master of language and logic who could condense virtually any subject into elegant and persuasive prose. The magazine is indebted to him for much of its strength in covering economics, finance, and education, and the awards he collected attest to this: the School Bell Award of the National Education Assn. and prizes from Sigma Delta Chi, the Overseas Press Club, and the Gerald M. Loeb Foundation. He put his coverage of education to practical use for many years as a member and president of the school board in Chappaqua, N. Y., which was the family home for 33 years. He also served on the visiting committee of Harvard's economics department (earlier, he had attended Harvard as an Arthur Lehman fellow in economics) and on the Joint Council for Economic Education.

On Oct. 13, at the age of 74, John Cobbs died in Memorial Hospital in Easton, Md., near his retirement home in St. Michaels, Md. He will be long remembered.

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BACKLASH: THE UNDECLARED WAR AGAINST AMERICAN WOMEN
Susan Faludi
Crown • 552pp • $24

DEBUNKING THE ANTIFEMINIST MYSTIQUE

The women's movement has taken a giant leap backward in the past decade. The precarious status of legalized abortion, the lack of progress for women in Corporate America, the declining number of women in national political office, and the constant, negative drumbeat of media reports on the travails of working women all signal a reversal of American feminist fortunes.

That's the argument Susan Faludi makes in *Backlash: The Undeclared War Against American Women*. Faludi, a Pulitzer Prize-winning journalist with *The Wall Street Journal*, contends that leaders of the new right—religious fundamentalists and conservative politicians—achieved astonishing power in the 1980s. Then, with help from the trend-hungry and credulous media, they waged a misleading and damaging assault on women's rights. Feminism, they said, erodes the family values on which America was built. And loneliness, infertility, and stress among women are the effects of feminist-inspired freedom.

What freedom? asks Faludi. Citing the gap between men's and women's pay, the lack of adequate child care, and the increase in the number of women living below the poverty line, she argues that if women are unhappy, it is because they have not achieved equality.

Drawing on voluminous polls and studies as well as original reporting, Faludi carefully debunks myths that have taken on lives of their own. She begins with the now-infamous 1986 Harvard-Yale study that showed that single women's chances of marrying drop significantly after 30 and are extremely slim after 40. When *Newsweek* covered the study it concluded that single women "are more likely to be killed by a terrorist"—an analogy that was repeated over and over in other press reports. The media frenzy surrounding the study, Faludi notes, continued well after demographers and the Census Bureau had discredited the findings. In fact, she reports, census data show that it is single men between 24 and 34 who face a shortage of potential spouses. As for the terrorist metaphor, Faludi quotes a former *Newsweek* intern who says that what began as a reporter's joke somehow made it into the magazine as fact.

Delving deeply into other headline-making events, Faludi brings to light astounding inaccuracies. Self-help books and women's magazines, for instance, blamed feminism for unprecedented bouts of depression among career women. But Faludi quotes several sources who say the leading cause of depression in women is low social status. Adding that women's reports of depression have historically outnumbered men's by 3 to 1, Faludi says National Institute of Mental Health data show that in the early 1980s, the gap shrank to less than 2 to 1.

Faludi also throws cold water on press attacks on day care, including the notion that sexual abuse in day-care centers is epidemic. In 1985, she writes, a study from the University of New Hampshire's Family Research Laboratory recorded 1,300 reported cases of abuse in centers, compared with 100,000 reported cases of abuse by family members.

But given sensational headlines, Faludi writes, it was all too easy for the entertainment and advertising industries to join the backlash. On TV's *thirtysomething*, Hope, a leading character, decided—after a disastrous return to the office—to stay home with her daughte
That, Faludi asserts, reflected the ma
co-creators' yearnings more than wor
en's. When ABC polled female viewer
most wanted Hope to go back to work

Perhaps the most notable ad campaig
of the era was *Good Housekeeping*
"New Traditionalist" campaign. Th
text, which claimed women were hungr
for more family-oriented lifestyles, s
off a spate of copy-cat ads and tren
stories. When Faludi asked the ad ma
behind the print campaign about su
porting research, he cited a Yankelovic
Monitor report on 2,500 Americans. Bu
Yankelovich says *Good Housekeepin*
seriously misinterpreted the results.

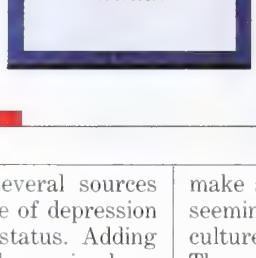
In the book's best section, Faludi pr
files several leading antifeminists, ma
and female, and exposes startling diffe
ences between what they say and wha
they do. Connie Marshner, for instanc
is an outspoken critic of feminism an
was once the highest-ranking woman a
the Heritage Foundatio
According to Faludi, eve
as she lobbied for legisl
tion that would encourag
women to stay home wit
their families, she worke
long hours and at on
point lived in another cit
leaving her children in th
care of her husband an
babysitters. Marshner ac
mits to Faludi: "I'm a te
rible housekeeper. To m
it's very unrewarding, u
fulfilling work."

Faludi is careful to sa
that the backlash is nc
the result of an organize
conspiracy. Rather,
backlash "returns ever
time women begin t
make some headway toward equality,
seemingly inevitable early frost to th
culture's brief flowerings of feminism.
The women's suffrage movement of th
mid-19th century, for instance, gave wa
to the restrictive Victorian era—whe
the trend spotters of the day also de
clared a man shortage. And the flood c
women into better-paying, traditionall
male jobs during World War II was fo
lowed by the suburban stupor of th
1950s.

Even for committed feminists, Falu
di's analysis is an eye-opener. But he
relentless presentation of facts, figures
anecdotes, polls, and interviews is s
dense that at times the book is hard t
read. It's as if she's trying to outgu
potential critics before they open fire.

A more restrained voice that echoe
many of Faludi's themes can be heard i
another new book, *Moving the Mour
tain: The Women's Movement in Ame*

Faludi says the media have given credence to a host of astounding inaccuracies



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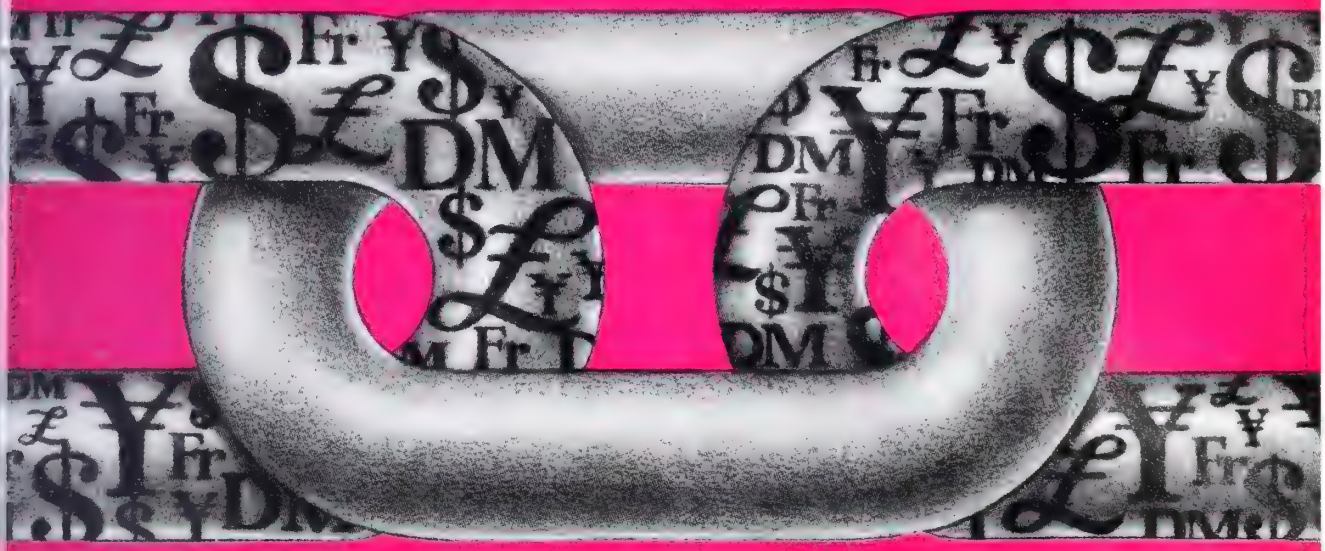

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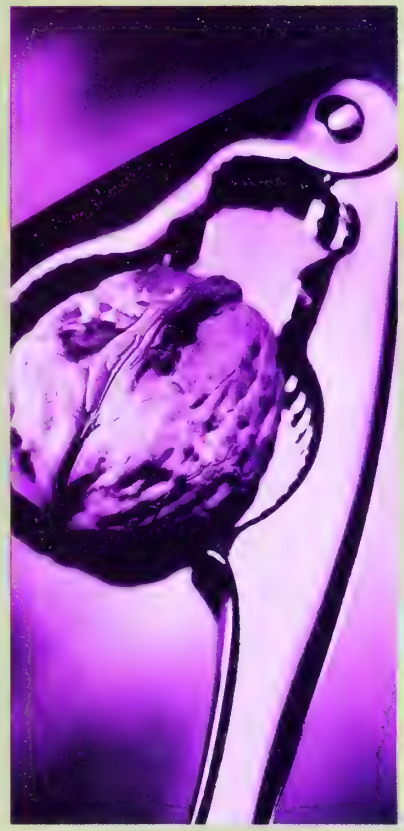

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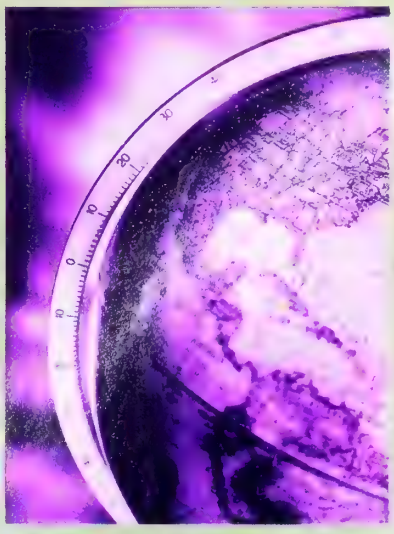

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since 1960 by Flora Davis (Simon & uster). A chunk of this comprehen- and lively history of modern femi- n is devoted to the power base of the right and its erosion of feminist ns. Davis, too, observes that periods dramatic social change are followed reversals, but she's optimistic. "When backlash is extreme," she writes, entually the pendulum must swing k in the other direction."

'aludi is less patient. Except for a ıer vague call to action, however, she ves women with few ideas about how pull themselves out of this lull. No tter. *Backlash* is a thinking person's k. Instead of spoon-feeding answers, udi offers compelling and disturbing dence that some of the toughest bat- for women are still to come.

BY WALECIA KONRAD

ınta Correspondent Konrad often re- ts on women's issues.

)K BRIEFS

ALITY OR ELSE:
REVOLUTION IN WORLD BUSINESS
.loyd Dobyns and Clare Crawford-Mason
ughton Mifflin • 309pp • $21.95

UALITY 101

t's hard to believe that there's any- one left in the U. S. who hasn't heard of or been directly touched by the ality movement sweeping Corporate ıerica. In one company after another, ıality" has become a sort of mantra. Yet, despite all the sloganeering, no until now has written a coherent)k that makes the debate on the role quality in U. S. competitiveness acces- le to the general public. *Quality or se* meets that challenge head on.

Unlike most such business books, this tells the story in straightforward ıguage stripped of jargon. It ac- aints the uninitiated with the ideas of four quality gurus—W. Edwards ming, Joseph M. Juran, Philip B. osby, and Armand V. Feigenbaum—d explains how each differs from the ıer. It also details success stories)m Federal Express Corp. to Motorola . Most important, it places the story thin the framework of America's de- ne in competitiveness.

This is not an elegantly written book. times, it reads more like a script from ocal television news show (it is in fact companion to a Public Broadcasting rvice series). But the book clarifies e often-mysterious hoopla about quali- and makes a convincing case that e movement is crucial to the nation's ture.

BY JOHN A. BYRNE

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NIVERSITY OF CHICAGO

Western Europe, the U. S., and Japan should not cave in to pressure to provide economic assistance to the Soviet Union and countries in Eastern Europe. Also, they should stop making loans and grants to other countries, too, aside from those for humanitarian purposes.

Economic aid gives governments breathing room to postpone the crises—such as occurred in Argentina, Mexico, and the Communist countries—that force reluctant governments to take unpopular remedial measures. Thus foreign grants delay privatization programs, reduction of subsidies, cuts of import barriers, and cutbacks in other excessive and misguided controls that are largely responsible for bad economic performance.

A Soviet aid package would go to the central government, or to the governments of the Russian and other republics, not to the fledgling private sector and would-be entrepreneurs. Economic aid is usually channeled through other governments because it is far easier to negotiate with them than to help companies and families directly.

SHORT-TERM FIX. Since too much government is typically the problem, not the solution, economic aid is counterproductive. Governments use it as a short-term fix to keep economic pressure on longer. This prolongs problems and does little to solve long-term woes. Any country that institutes significant reforms and creates a healthy economic environment will have scant trouble attracting loans and investments from Western companies and banks.

Some economists recommend that grants and loans to the Soviet Union be tied to reductions in their spending on nuclear and conventional weapons. But the country's dismal economic performance is already forcing large military cutbacks. In spite of any such link to arms cuts, if aid from abroad reduces the economic pressure to reform, spending on arms could be greater than would have occurred without the assistance.

The harmful effects of economic aid are not confined to formerly Communist countries, as can be seen from the experiences of Egypt and Israel, the two biggest recipients of assistance from the U. S. during the 1980s. Egypt is a miserably poor country that has taken only a few steps to throw off the socialist shackles imposed by Gamal Abdel Nasser during the 1950s and 1960s. It continues to have a huge and corrupt government sector, enormous subsidies of food and other goods, a weak private sector, and subsidized, state-run companies that are sheltered from competition with better products made elsewhere.

Although Israel grew very well until the 1970s, since then it has been bogged down with unemployment, much slower growth, and periods of hyperinflation. Relative to the size of its economy, Israel probably has the largest public sector in the free world, with government-run companies dominating many industries, extensive wage controls, and restraints on foreign competition. Israel would have gone much further toward reducing the government's stranglehold were it not for continued generous economic assistance from the West, especially the U. S. Some Israelis have been so exasperated that they are calling for greatly reduced dependence on foreign aid.

ROADS AND BRIDGES. The stories are similar for India, Pakistan, and the African countries that have enjoyed—if that is the word—easy access to Western largess. Their bad economic performance also is traceable to large subsidies to favored interest groups and too many controls over the private sector.

The U. S. alone provides more than $1.5 billion of aid annually through such international organizations as the African Development Fund, the International Development Assn., and the World Bank. These agencies usually lend or give money to governments, not to the private sector. Obviously, some grants and loans from countries and international organizations have been spent on socially useful infrastructure, such as roads, bridges, airports, and sewage systems. But these account for a small share of all assistance. And since spending on infrastructure is only a minor part of the budgets of recipient countries, they could easily spend more without foreign help if they had the will to do so.

Economic assistance is supposed to do for Eastern Europe and the Soviet Union what the Marshall Plan did for Western Europe after World War II. But the problems then were very different. Europe was prostrate from the war and needed time to restore the basically private enterprise systems of the prewar era.

What Eastern Europe needs is just the opposite: constant pressure for a radical shift away from government control and toward freer markets. Just as the Marshall Plan helped restore the old system to Western Europe, similar assistance to the East would help maintain the excessive government direction and management of their economies.

The truth that a child's initiative is weakened when parental help is too readily available applies to economies as well. They are more likely to prosper when they are forced to put their own houses in order and have to bear the economic burden of the transition toward productive market economies.

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The Past, Present, and Future of
Network Computing.

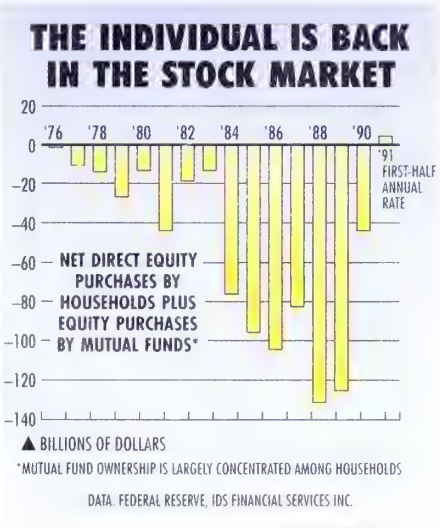
IN THE PAST, THERE WAS ONLY ONE WAY A COMPANY COULD RELIABLY EXCHANGE INFORMATION WITH THE COMPETITION.

BY GENE KORETZ

WILL HOUSEHOLDS WARM UP TO STOCKS IN THE 1990s?

The friendlier attitude some individual investors have been displaying toward the stock market recently—after decades of disaffection—can hardly be described as a budding romance just yet. But "it may foreshadow a trend with important implications for both equities and the economy in the decade ahead," says economist William C. Melton of IDS Financial Services Inc.

Although households were net direct sellers of stock, at a $28 billion annual rate, in the first half of this year, that's down sharply from last year's pace and the average $100 billion-plus annual liquidation rate that prevailed from 1984 through 1989. Moreover, net purchases of equity mutual funds through August already total $27.6 billion.



The upshot, says Melton, "is that households appear to be on the way to achieving significant positive net purchases of equity—directly and through mutual fund investments—for the first time in three decades."

Observers have attributed the slow liquidation of equity holdings by individuals that began in the late 1950s to such developments as the growth of the private pension system, which reduced the need for personal retirement savings and fostered the institutionalization of the stock market by pension funds and other financial intermediaries. But Melton blames the huge disgorgement of stocks by individuals in the 1980s on the takeover boom, which shrank the supply of equities by some $600 billion and thus "inevitably shrank the holdings of households as well." And investment strategist E. Michael Metz at Oppenheimer & Co. stresses Americans living beyond their means in the 1980s, as well as "the lure of extraordinarily high short-term interest rates."

Whatever the cause of the equity sell-off by households, however, the big question is whether the apparent revival of interest in stocks will grow. Melton thinks it will. Yields on fixed-income securities have declined markedly in recent years, he notes. And most of the purportedly "safer" investment vehicles that compete with stocks—from bank deposits and insurance policies to high-yield bonds, commercial real estate, and even homeownership—are now perceived to be far riskier than in the past. "In a world of risky investments, stocks, which consistently racked up double-digit returns during the past decade, look better and better," says Melton.

Metz notes that individual investors are entering the 1990s "with extraordinarily low exposure to equities as a percent of their financial assets." If interest rates and inflation move lower and stay there, as many economists predict, he believes households could become the dominant purchasers of stocks in a market in which public and private pension funds with constrained cashflows are likely to take more of a backseat.

What might such a stock market be like? Metz sees less obsession with short-term performance and less use of indexes and other market derivatives. As individual investors reenter the market, volatility caused by herdlike behavior could decline, and emphasis on active stock selection is likely to grow.

In such an environment, says Metz, "it is just possible that stock markets in the 1990s will better perform their classic functions of raising new equity and efficiently allocating capital."

FOREIGN STUDENTS KEEP COMING —AND KEEP SPENDING

The problems afflicting the U. S. economy haven't dampened the desire of foreigners to study in America. The Institute of International Education reports that the number of foreign students at U. S. colleges and universities hit a new high of 407,530 in the 1990-91 academic year. That's 31% more than in 1980-81 and well over five times the number of U. S. college students overseas.

For much of the student invasion, you can credit the lure of the free enterprise system, U.S.-style, and the excellence of U. S. higher education in the sciences. Business and management w the most popular field of study, follow by engineering, math and computer s ences, and physical and life sciences.

The growing overseas contingent American colleges is making its ma on the trade balance. In 1986, forei students spent $3.3 billion more in t U. S. than American students spe overseas. In 1990, the education "expo surplus hit $4.3 billion, and so far t year, it is running at a $4.7 billion a nual rate.

A TAX CUT NEED NOT ZAP THE BOND MARKET

The growing likelihood that Ame cans will be provided a modicum tax relief in the coming election ye has momentarily spooked the bond m ket, which fears that such fiscal bla dishments inevitably involve a dose higher inflation. But economist Nan Lazar at International Strategy & vestment Group points out that the l two times taxes were cut significantly in early 1975 and late 1981—stock pric bond yields, and inflation all posted p tracted declines.

In both cases, notes Hyman, tax were cut because the economy w weak. "The current logic," she says, to sell bonds because reflating tax c are probably coming. However, past t cut episodes suggest that bond yie are still likely to move lower if the ec omy stays weak and inflation decline

WHY SOME AIRFARES STAY ALOFT WHILE OTHERS PLUMMET

Consumers incensed by wide diff ences in prices charged by an a line for similar trips can blame compe tion. According to a recent Natio Bureau of Economic Research study economists Severin Borenstein a Nancy L. Rose, such price differenti tend to widen as the number of co petitors on a route increases.

The explanation: Increased compe tion typically focuses on the kind of ti ets bought by tourists—advance-purcha tickets requiring a Saturday night st But competition has a much smaller fect on the higher-priced unrestrict tickets that business travelers usua buy. So airlines still tend to charge r atively high prices for those seats they reduce discount fares in response cuts by competitors.

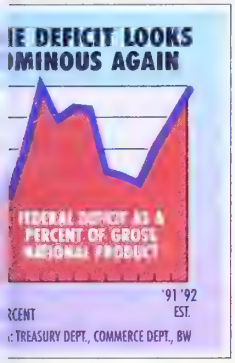
EMBER 4, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

WO PILLARS OF THE ECONOMY RE LOOKING SHAKY

ousing and autos are only specks in the gross national product. Their far-reaching impact, however, on the demand for everything from light ires to lug nuts wields a powerful influence on the ness cycle. Right now, they are saying that the very is struggling.

ousing starts fell in September. And car buying, r weakening in August and September, crashed in y October. The consequence: Industrial output is ring down. If consumer demand for housing and os is flagging, there isn't much else on the horizon to erate production pep this quarter. And so far, manuuring has been the recovery's main engine.



Someone had better remind the bond market of all this. Until lately, the fragile state of the recovery—and its implications for lower inflation and interest rates—had been the major influence in the bond rally that began in mid-July. Yields on 30-year Treasury bonds fell from 8.5% to 7.8% in early October. But since then, the market has been pelted by worries that are, least for now, overshadowing the still-uncertain out- for the economy.

combination of inflation jitters, worries about tax (page 28), the Federal Reserve's failure to cut short- n rates, and a rush of debt issues from Japan lifted 30-year yield back to nearly 8.1% on Oct. 22, prompt- speculation that the bond rally may be over.

he bond market is particularly upset by the prospect ax cuts. A tax package generates concerns about ation and opens the possibility of an even greater d of Treasury paper, if the cuts further widen the eral deficit.

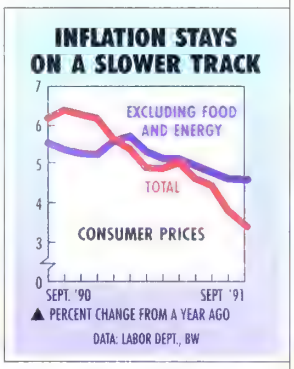
he budget gap is already expected by most econo- ts to zoom to at least $350 billion in fiscal year 1992. he consensus expectation for GNP growth in 1992 is he mark, the deficit is already on track to approach record of 6.3% of GNP set in 1983 (chart).

IE BOND ALLY AY NOT E OVER

The bond market may be overreacting, however. Traders got bent out of shape on Oct. 17, when the government reported that the consumer price index rose an xpectedly large 0.4% in September. The core CPI, ch excludes volatile swings in food and energy—rose a disquieting 0.4% for the fourth consecutive month. But that is not indicative of the CPI's true trend.

Prices for medical care, tobacco products, education, and entertainment—only about 15% of the CPI—rose rapidly in September, but not because of economic strength. Medical costs are a structural problem, new taxes are boosting tobacco prices, education costs are rising because of troubled state and local governments, and entertainment prices posted a one-time jump.

Taking the longer view, inflation—both overall and the core rate—continues to moderate (chart). Core inflation has fallen from 5.7% in February to 4.5% in September. As in past business cycles, the progress should continue well into the recovery, particularly since the upturn is laboring.



Bond traders may also be misreading the Fed. The downbeat message from housing and autos says that the central bank is likely to find the opportunity to shave another quarter-point off the federal funds rate, now at 5¼%, sooner rather than later. Indeed, the Oct. 23 report from each of the Fed's 12 district banks is not encouraging. It said that the economy in September and early October was "weak or growing slowly."

HOUSING MAY DECIDE TO HIBERNATE

The bond market is likely to regain its focus in coming months, as evidence of the recovery's battle to survive becomes clearer. Housing starts in September fell for the first time since March, dropping by 2.2%, to an annual rate of 1.03 million (chart, next page). Building permits, an indicator of future construction, rose 2.7%, recovering about half of their 5.2% decline in August. Starts of both single-family units and apartment buildings fell, and only the South posted a gain.

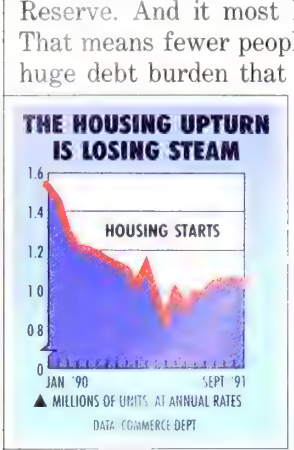
The slip in housing starts is somewhat surprising, because it came while mortgage rates were falling. The lift from lower rates, however, is being offset by factors that are a drain on housing demand. Fewer new households are being created, for example. And affordability remains a problem for some consumers. Builders, meanwhile, seem to have been hit hard by the credit crunch.

In addition, consumers continue to worry about the future. According to preliminary results, the University of Michigan's index of consumer sentiment dropped in October to its lowest level since the gulf war.

Fewer new jobs and smaller pay raises are causing

ERIC HOFFMANN/BW

headaches for consumers, who are already strapped for cash. Personal wealth—households' assets minus their financial liabilities—fell in 1990, according to the Federal Reserve. And it most likely will drop again this year. That means fewer people are willing or able to carry the huge debt burden that comes with a new house.



Right now, the end to falling interest rates adds even more risk that the housing recovery could stall out. The average fixed rate on a 30-year mortgage rose slightly in mid-October, to 8.9% from 8.89% in the week before, according to HSH Associates. That was the first increase in four months.

Meanwhile, the auto rebound is anything but turbocharged. Like housing, the recovery in car production has been steady but subdued. Auto makers have kept production modest, making fewer cars than have been sold this year (chart). That has kept inventory levels low.

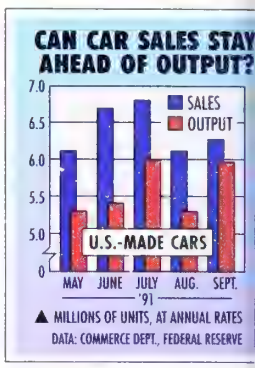
But can Detroit continue that success in the fourth quarter? Auto makers plan to produce at an annual rate of about 6.1 million cars this quarter, but even that may be too many. Only 6.2 million domestically made new cars were sold in the middle 10 days of October, after an awful 5.5 million pace earlier in the month. October car output may outpace sales for the first time in two years.

FACTORIES WRESTLE WITH WEAK DEMAND

If cars and housing lose ground this quarter, the spillover effects will be especially acute in the industrial sector. Already, the factory recovery is flagging. Industrial output rose by only 0.1% in September, and after revisions, August production was flat, instead of the 0.3% gain originally reported for that month. So although third-quarter industrial production grew at a 6% annual rate, that healthy advance reflected strengt in June and July, not in the later months.

A large weather-related drop in energy deman dragged down the September output data. The decline i utility use also caused the industrial operating rate t fall to 79.7%, down slightly from 79.8% in August.

Manufacturers lifted their output by a healthy 0.5% i September, as auto output jumped 8%. But excludin autos, manufacturing output was up a mere 0.1%, a many producers struggled with lackluster demand.



Makers of business equipment, excluding autos, saw output gains slow during the summer. Capital-goods makers may not be able to shake off their malaise in the fourth quarter. The rise in long-term interest rates will hurt domestic demand, and foreign buyers are showing signs of fatigue.

Indeed, foreign trade was a drag on third-quarter GNP. In August, the merchandise trade deficit rose to $6.8 billio up from $5.9 billion in July. A 3% drop in exports, t $34.2 billion, along with a smaller 0.6% fall in imports, t $40.9 billion, caused the gap to widen. After taking pric changes into account, the trade deficit so far in the thir quarter is 50% bigger than it was in the second quarte

The rise in imports may also be a drag this quarter a significant amount of those foreign goods landed inventories. If so, then the inventory rebuilding that expected for the fourth quarter would be less of a boo for domestic producers.

That's another reason to worry about the upturn manufacturing, which is already wrestling with hig interest rates and sluggish demand for autos and hou ing. The real danger is that, if the factory rebound go flat, the entire recovery will be in serious trouble.

THE WEEK AHEAD

GROSS NATIONAL PRODUCT

Tuesday, Oct. 29, 8:30 a.m.
The real gross national product likely grew at a 2.6% annual rate in the third quarter, say economists polled by McGraw-Hill Inc.'s MMS International. GNP fell by 0.5% in the second quarter.

NEW SINGLE-FAMILY HOME SALES

Wednesday, Oct. 30, 10 a.m.
New houses probably sold at an annual rate of 540,000 in September, the same pace as in August.

PERSONAL INCOME

Wednesday, Oct. 30, 10 a.m.
Personal income likely rose 0.4% in September, the same gain as in August. Consumer spending probably increased 0.5% for the month, on top of a small 0.1% rise in August.

FACTORY INVENTORIES

Thursday, Oct. 31, 10 a.m.
Factory inventories were likely unchanged in September. Stockpiles have fallen for nine consecutive months, including a 0.3% drop in August.

EMPLOYMENT

Friday, Nov. 1, 8:30 a.m.
The MMS economists forecast that nonfarm payrolls rose by only 40,000 in October, after a 24,000 advance in September. The October jobless rate, however, is expected to rise to 6.8%, from 6.7% in September.

LEADING INDICATORS

Friday, Nov. 1, 8:30 a.m.
The government's index of leading in cators probably rose 0.1% in Septembe In August, the index was unchanged.

NAPM SURVEY

Friday, Nov. 1, 10 a.m.
The National Association of Purchasi Management's index of business activi likely edged up to 55.2% in Octob from 55% in September.

CONSTRUCTION SPENDING

Friday, Nov. 1, 10 a.m.
Construction spending was flat in Se tember, says the MMS consensus. In A gust, outlays rose 0.3%.

ERIC HOFFMANN/BW

For you, investing isn't really about money. It's about that horse farm in Kentucky. Or four years at your alma mater for the twins. Or maybe a vintage P-51 Mustang fighter—and the time to restore it.

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SUDDENLY, EVERYONE WANTS TO CUT TAXES

BUT FIRST, THERE'LL BE ALL-OUT WAR OVER THE DETAILS

Washington has a bad case of tax-cut fever.

Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.) says: "The economy is dead in the water, and we have to jump-start it." House Minority Whip Newt Gingrich (R-Ga.) and Speaker Thomas S. Foley (D-Wash.) agree that Congress should provide a stimulative jolt before quitting for the year. Housing Secretary Jack F. Kemp, getting a headstart on an Administration that's still pondering its options, is calling for a tax summit to consider "emergency measures." Even curmudgeonly House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.) is faltering. He plans to lay out a scheme of his own within the next week or so.

A tax cut that seemed inconceivable just weeks ago could be reality by year-end. It almost surely would include a cut in the tax on capital gains and a reduction in income taxes for middle-income families. It also will probably contain some kind of rate hike on the wealthy. But despite the growing clamor, there's no assurance that ideological differences can be bridged quickly enough to assure a deal this year. And there's no guarantee any quick-fix tax bill will do much to juice up the sputtering economy. "No doubt there will be much macro effect," says University of Michigan economist Joel B. Slemrod.

In the frenzy of an approaching election year, politicians may agree something should be done. But they're badly divided over details. Congressional Democrats are squabbling among themselves about what kind of middle-class tax relief they favor and how to pay for it.

At the White House, the idea of anti-recessionary action has been given new urgency by polls showing that voter concern about the economy is beginning to chip away at President Bush's reelection

A TAXPAYER'S GUIDE TO THE WASHINGTON WRANGLING

PROPOSAL	REDUCED SOCIAL SECURITY TAXES	EXPANDED TAX-DEFERRED SAVINGS ACCOU
ECONOMIC IMPACT	■ Would increase consumption, possibly reduce savings	■ Will add to private saving, may mean more consum if savings are shifted to tax-deferred from taxable sou
BUDGET IMPACT	■ Would yield a steady revenue loss each year	■ Substantial revenue loss over the long term. Financi with defense cuts means higher deficits in first three ye bigger offsets in fourth and fifth years
WINNERS AND LOSERS	■ Aimed at middle-income workers, also big benefits for small businesses	■ Biggest help goes to upper-middle-income taxpayer such as potential homebuyers, with extra income to sa

ort. But the Administration is deep-
plit. An insurgent faction, led by
ıp and Commerce Secretary Robert
Mosbacher, is pushing for a big eco-
ic-growth package. They are bat-
; Treasury Secretary Nicholas F.
dy, Budget Director Richard G. Dar-
, Council of Economic Advisers
rman Michael J. Boskin, and White
se Chief of Staff John H. Sununu,
argue the economy doesn't need the
of "help" that Congress is ready to
r. They fear that altering last year's
get accord would remove the final
d of fiscal restraint. "Once a budget
ement is opened up," warns one Ad-
stration aide, "people are going to
t driving tanks and trucks through
Moreover, opponents are concerned
a new tax fight would expose Bush
n to Democratic charges that he fa-
the rich. A worried Bush seems to
ilting to the do-something crowd.
sh is way out in front of his econom-
lvisers," Kemp says. "What a trage-
t would be if we focus on counting
eans."

RK CHOICES. The White House is
ggling to get control of runaway
its. But that effort will be complicat-
y Bush's travel schedule, which will
him away from Washington for
h of the fall. And even if Bush and
ressional leaders come to terms on a tax package, economists doubt it will do much to boost growth. Most feel that a tax cut of $10 billion—or even $20 billion—a year won't do much for a $5.5 trillion economy, even in the short run. Says former Reagan tax aide Eugene Steuerle: "It's hard to believe that anything this small can really make much of a difference. We're talking about less than 0.5% of GNP."

It's tough to predict the impact of any tax measure until policymakers—who still face a $300 billion-plus federal deficit—decide how, or whether, they want to make up for lower revenues. The choices are stark: Do you cut taxes on some individuals and raise them on others? That won't provide much of a spur to the economy. Paying for a tax cut by cutting defense spending, as Bentsen advocates, could actually slow the economy a bit. According to Laurence H. Meyer & Associates, a St. Louis economic consulting firm, a $10 billion tax cut that's offset by a $10 billion reduction in defense spending by the end of 1992 would trim 0.2% from economic growth. And there's a longer-term issue raised by proposals to use defense savings to cut taxes: Spend future peace dividends on a tax break today and they won't be there tomorrow for education, health, and other "human capital" investments that so many politicians back.

Economists doubt that any package will do much to boost growth now

The final choice for policymakers is to cut taxes and simply let the deficit grow. According to economic theory, widening the deficit should be stimulative. But the bond markets, which have tanked since rumors of a tax cut began to fly, aren't cooperating. And a little tax trimming won't do much for the economy if interest rates rise or even if market fears of a higher deficit limit the Federal Reserve's ability to cut rates. Treasury's Brady and chief economist Boskin are warning Bush of the dangers of a tax-cut-induced spike in interest rates.

Market jitters over the tax talk have "already cost us 25 basis points on the long bond," says one senior Fed official. "And that's just the first round." The Fed's concerns make it clear that the deficit still matters. "The current malaise does call for some kind of fiscal stimulus," says Mellon Bank chief economist Norman Robertson. "But it's hard to contemplate tax cuts when we face the prospect of a $400 billion deficit next

DED DEPENDENT-CHILD CREDIT

d boost growth some by stimulating
n spending

00 credit would cost $60
ver five years

its are targeted to the working poor.
less valuable for higher-income families

LOWER CAPITAL GAINS TAX RATE

- May delay investment until bill becomes law, then would create a temporary spurt in investment
- Raises revenue in the first year, but a debate rages over whether revenues would later decline
- High-income investors are the biggest winners

IT TO RI PHOTOGRAPH ... THROUGH THE IMAGE BANK KING GRANT TUSSY

year. Any package would have to be very, very small."

How do you get the biggest bang for the paltry bucks out there? Cutting capital gains. Bush's favorite plan, would likely do the least. A months-long debate would probably have the perverse effect of locking up capital, while investors wait for the lower tax rate to take hold. Once the new rate kicked in, it would set off a flurry of transactions, but the net investment probably wouldn't give the economy immediate help. Says Meyer & Associates economist Chris Varvares: "It doesn't offer much stimulus potential. You're not going to unleash investment in small firms overnight." Finally, Bush's capital-gains proposal, which provides explicit incentives for long-term investment, was designed to prevent the kind of asset-flipping that might spur short-run activity.

QUICK FILLIP. What about some kind of middle-income tax relief? There are lots of different versions of this floating around: raising the personal exemption, creating a new credit of $300 or more for each child, or slashing the Social Security payroll tax. Each would put money in the hands of people most likely to spend it fast, giving the economy a short-term boost. Even if the middle-class cut were financed with a new tax on the wealthy, the economy might still get a small jolt. The downside: The wealthy will have a bit less to save and invest. And that, economists say, will hurt in the long run.

Bentsen has been pushing a plan to expand tax benefits greatly for contributions to individual retirement accounts. Economists have been arguing for a decade over whether IRAs create new long-term savings or merely encourage people to shift money from taxable to tax-deferred accounts. Curiously, if the critics of IRAs are right, the new tax break could actually encourage wealthy individuals to spend some of their tax-generated windfall. If IRA boosters are correct, the tax break will increase long-term savings but do nothing for today's economy. Says Varvares: "Tax cuts aimed at boosting savings are good long-term policy, but not good countercyclical policy."

Lurking in the wings is yet another tax-policy evergreen—restoration of the investment tax credit. Bringing back the old ITC, which was killed in the big 1986 tax reform, would be hugely expensive and just isn't in the cards. But a targeted credit—limited to increased spending for specific types of investment—is getting a second look on Capitol Hill. Many economists believe such a focused cut may be the way to go. Says Lawrence Chimerine, senior economist at DRI/McGraw-Hill and sometime adviser to New York Governor Mario M. Cuomo: "If we're going to cut taxes, we ought to get the maximum bang for every buck." But plans such as Chimerine's would give government a direct role in choosing winners and losers, posing problems for an Administration hostile to any hint of industrial policy.

The truth of the matter is that many tax-cut backers know full well that would provide little short-term stimu Political panic over the sluggish re ery is a chance for them to get s long-desired structural changes wri into the tax code. "My concern is investment side," says Mark Bloomfi president of the American Council Capital Formation, a business gr But will a tax cut help the econ now? "It may have some symbolic ue," he says.

GATHERING STEAM. Tax reduction n not help today's economy, but the t is on the move. Many Washington ha are reminded of 1981, when Congr and President Reagan engaged in a sastrous bidding war over tax cuts. in 1981, the deficit was only $78 bill and the economy was sliding into worst recession of the postwar era.

Even the huge 1991 deficit may prevent a new outbreak of tax fe Says Gail Fosler, chief economist at Conference Board: "When you are far away from balancing the budget, very hard to argue that $20 billion way or the other is going to hav material effect."

Spoken like economist. But at moment, Bush congressional lead are thinking mai of politics. The Pr dent has been stir by his dip in polls. More than of those surveyed a new *Washingt Post*-ABC News believe that the t might be ripe fo new President to the nation in a n direction."

And on Capi Hill? After scand over check-kiting unpaid tabs in House restaurant— say nothing of the sastrous Clare Thomas confirmat hearings—lawmak want desperately hand voters a Chr mas present. Wh all is said and do this may be one cut that'll do far m for politicians th for the economy.

By Howard Gle man and Mike Namee, with Doug Harbrecht and Pa Dwyer, in Washingt

THE BUDGET: HOW WASHINGTON PAINTED ITSELF INTO A CORNER

When the Bush Administration agreed to new budget rules as part of last year's deficit-cutting deal with Congress, a key White House goal was to keep Democrats from raising taxes to fund higher spending. Bush might have been more skeptical if he had realized how hard it would be to cut taxes—even in order to spur economic recovery.

THE RULES MAY STYMIE BUSH . . .

The rules create a set of five budgetary "boxes"—for military spending, foreign aid, entitlements such as medicare and farm supports, one more for all other domestic outlays, and, finally, one for taxes.

Under the rules, Congress can shift money among programs within each box. It can spend less than an agreed-upon lid for the box. But it may not move money from one box to another. The only exception: Taxes may be raised to expand entitlement programs. That provision was backed by House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.), whose panel rules over both revenue bills and most entitlements.

. . . AND ROSTENKOWSKI

PAINFUL SUBJECT. Lawmakers now are talking about using the proceeds from cuts in military spending to finance tax reduction. This sounds great, but there are three technical problems. The plan violates the rule against revenue shifting. Sharp cuts in defense outlays were already assumed when the deficit-reduction targets were set last year. And lawmakers are proposing to cut taxes now, though the savings from further military cuts wouldn't be realized for several years.

So what can Congress do? It could rewrite the budget deal, but both Democrats and Republicans are reluctant until after the 1992 elections. More likely, Congress and the White House will conspire in a big budgetary wink. If President Bush and three-fifths of each house agree, they can simply ignore the rules and cut taxes.

MPETITIVENESS CHIEF QUAYLE IS MAKING BUSINESS HAPPY, CONSUMER GROUPS LIVID

AN QUAYLE, EGULATION TERMINATOR

e's pursuing the cause with a vengeance—and scoring political points

You won't hear any Dan Quayle jokes from Roland S. Boreham Jr. The Fort Smith (Ark.) chief ecutive, whose Baldor Electric Co. uilds motors, has signed up for uayle's campaign to simplify product- bility laws. "The system is so doggone mplicated and expensive, other coun- ies are laughing at us," he says. We're at a competitive disadvantage." But is the Vice-President, whose aky political reputation casts a long adow over his role as head of the esident's Council on Competitiveness, e guy to lead the charge? Boreham uses. "To hell with that," he says. When someone comes along, fighting ck effectively, I say go for it."

O EXCUSE.' The polls show that lots folks still laugh at the boyish-look- g Hoosier. But in uayle's unsung role as regulatory fanatic, he as found a niche in e city of long knives d short memories. "I have a political genda," Quayle told USINESS WEEK. "It's to ave as few regulations possible."

Those are words busi- ess loves. "I wasn't en- nored when Bush ose him" as Vice- resident, Hershey oods Chairman Rich- d A. Zimmerman said at a recent GOP fund-raiser in Harrisburg, Pa. "But Quayle's looking better." Adds Malcolm W. Gambill, president of Harsco Corp., a diversified manufacturer: "I'd probably vote for someone else for President. But the fact he's doing this is marvelous."

Normally, the job of screening regulations falls to the Office of Management & Budget. But President Bush has given the portfolio to the Vice-President. Since it was formed in 1989, Quayle's council has squelched dozens of regulations (table). Administration officials say he has been most successful in reining in the Environmental Protection Agency, less so in tempering the gung-ho Food & Drug Administration. His campaign against out-of-control legal fees got a boost on Oct. 23 when Bush directed all government agencies to follow Quayle's guidelines for holding down legal costs.

It's all raising some hackles. "There's no excuse for this kind of meddling," fumes one high-level EPA official about Quayle's efforts to soften final regulations for the revised Clean Air Act. Ralph Nader is blunter: "Dan Quayle is just a tool of corporate interests. He's looking for something to do until Jay Leno and David Letterman stop making fun of him on late-night television. This is bad policy, and he's going to pay for it politically." If Senator John H. Glenn (D-Ohio) has his way, the payments will start soon. Glenn has scheduled hearings of his Governmental Affairs Committee to consider whether Quayle is encroaching on the freedom of independent regulatory agencies.

Hearings or no, Quayle has big plans for his council. His aides are readying a proposal to speed approval of new drugs by the FDA. A January white paper will encourage easing legal restrictions on the activities of telephone companies. And Allan B. Hubbard, the council's executive director, has ordered a cost-benefit analysis of all federal government regulations over the past 15 years, though the methodology of such studies is widely considered suspect.

ROOSTING CHICKENS? Quayle's effort to become the regulatory terminator may not win him friends inside the Beltway, but it makes sense politically. He is galvanizing executives who will soon be asked to open their wallets for 1992's Presidential campaign—and who will be a key source of funding for Quayle's expected 1996 White House bid.

Democratic strategist William Galston thinks there may be some risk to Quayle. "These decisions will have consequences five years from now, and chances are one of them will come a cropper," says Galston. But he adds: "Quayle is working quite effectively to position himself as the champion of the moderate conservative mainstream."

To many in Washington, Quayle's regulatory review is unglamorous work. But George Bush disagrees. Back in 1981, the then-Vice-President took on much the same role as head of Ronald Reagan's regulatory task force. The result: Bush collected a fistful of corporate chits that came in handy in his Presidential campaign. That's a lesson Quayle is keeping firmly in mind as he dreams about 1996.

By Douglas Harbrecht, with Peter Hong, in Washington

COMPETITIVENESS, QUAYLE-STYLE

As chairman of the Council on Competitiveness, Vice-President Dan Quayle is the Bush Administration's bureaucracy-buster. Some examples:

ENVIRONMENT The Council temporarily blocked Environmental Protection Agency efforts to reduce power plant sulfur emissions that affect visibility in the Grand Canyon. The Council also exempted old power plants from some Clean Air Act requirements if they are updating their equipment

REGULATED INDUSTRIES The Council is working on proposals to reduce the time it takes for government approval of new drugs and to slash red tape for the biotechnology and telecommunications industries

REAL ESTATE The Council has endorsed legislation that would make it harder for the federal government to take private property. It also wants to make it easier to develop certain kinds of wetlands now protected by law

DATA BW

THE LATEST ON PROFITS: NOTHING TO RAVE ABOUT

And some companies that did well, such as United Telecom and Paccar, still face market skepticis

As companies posted third-quarter results, investors reacted by bidding stocks up or down depending on how surprising the numbers were. Two companies that may offer future surprises include United Telecommunications, operator of the Sprint long-distance network, and heavy-truck maker Paccar.

HURDLES FOR SPRINT

Wall Street doesn't forgive easily. On Oct. 16, United Telecommunications Inc. reported an 8% gain in third-quarter net income, paced by a 67% gain in the operating profit of U. S. Sprint Communications Co., the long-distance unit that accounts for 61% of its revenues. United Telecom Chairman William T. Esrey declared himself "very pleased." So what did investors do? They shrugged, and the stock ended the session with a bit of a loss.

One reason Wall Street is leery may be that it hasn't forgotten July 17, 1990. That day, United Telecom reported a steep drop in Sprint's ongoing earnings and $72 million in restructuring charges. The stock plunged 8¾, or 23%, in one day. Since then, it has only seesawed lower. Its current price of around 23 a share is just half the May, 1990, peak of 46⅜.

To win over investors, the company must prove that it can do two things at once: increase long-distance market share and hold down expenses. After the 1990 blowout, the company focused seriously—and successfully—on expenses. Operating costs at Sprint in the latest quarter gained less than 3% from a year earlier, contributing to wider margins (chart). But revenue rose just 5.4%, partly because of skimpy spending on marketing. Sprint's share of the long-distance market for more than a year has run flat at 8%, compared with 69% for American Telephone & Telegraph Co. and 13% for MCI Communications Corp., according to Yankee Group Inc., a market researcher.

Now, without abandoning cost controls, Sprint is vowing to focus more on winning new business. Sprint President Ronald T. LeMay says he hopes to free funds for more marketing and advertising by making cuts in areas that don't involve customer contact, such as network operations and administration.

EXPLOSION. United Telecom has plenty of things going for it. The company owns a clutch of local phone operators, such as United Telephone Co. of Florida, that are reliable income producers. What's more, Sprint's fiber-optic network has a deserved reputation for low-error transmission. SprintNet, formerly Telenet, is the world's largest public network for data transmission and enjoys an operating profit margin of 10% to 13%, estimates Marion M. Boucher, an analyst at Donaldson, Lufkin & Jenrette Securities Corp.

There are obstacles, too. Sprint expected expenses would decline once it finished building its network, but it didn't figure on the explosion of rivals' advertising and marketing expenditures, especially by AT&T. And Sprint still hasn't gotten the knack of selling itself, says Boucher. Cutting the fat at Sprint won't be easy: Several hundred jobs have already been trimmed since early 1990. Meanwhile, the local phone companies, which accounted for a third of revenue and 60% of operating profit in the latest quarter, already earn near the maximum permitted by state regulators, leav little room for improvem

Still, some trends are w ing decidedly in United T com's favor. AT&T, which fers to do battle marketing rather than p cutting, is refraining fro price war that would blo its smaller rivals. And for phone companies that wan expand into the long-dista market are looking at Sp as a possible partner.

LeMay thinks UT wi need any help. "Contrary the implications of our [s market] valuation," he s "we believe that we achieve increased reve

THE THIRD QUARTER: AN EARLY LOOK

The quick reading on September quarter profits of the BUSINESS WEEK 1000 is anything but promising. Many big companies—IBM, AT&T, GM, Ford, Westinghouse, and Citicorp among them—posted steep declines in earnings or mammoth outright losses.

Companies selling goods and services in the health care field and Wall Street firms were two of the few industry groups showing smart gains. Among the many others that did poorly: computer makers, broadcasters, manufacturers, and retailers, notably Sears. Bank earnings seem to be a mixed bag.

Noteworthy bright spots included RJR Nabisco, which posted a second straight profitable quarter, and Textron, which enjoyed a 14% jump in earnings.

ALCOA
AMERITECH
AMOCO
AMR
AT&T

BELL ATLANTIC
BELLSOUTH
BLACK & DECKER
BLOCKBUSTER ENT.
BRISTOL-MYERS SQUIBB

CAPITAL CITIES/ABC
CATERPILLAR
CHEVRON
CITICORP
COCA-COLA

COLGATE-PALMOLIVE
COMPAQ
CONNER PERIPHERALS
CORNING
CUMMINS ENGINE

DOW CHEMICAL
DOW JONES
FORD MOTOR
GANNETT
GENERAL DYNAMICS

GENERAL ELECTRIC
GENERAL MOTORS
GEORGIA-PACIFIC
GILLETTE
GOODYEAR TIRE & RUBBER

IBM
INTEL
INTERNATIONAL PAPER
JOHNSON & JOHNSON
KELLOGG

owth and net income at the me time." If he's right, in- stors who show the virtue forgiveness may enjoy an rthly reward.

By Peter Coy in New York

TRUCKLOAD OF PROFITS

emand for heavy trucks con- ues to cough, sputter, and ll. So shareholders of Pac- Inc. were pleasantly sur- ised with the company's ead-of-schedule delivery on t. 17: The Bellevue (Wash.) nufacturer of Peterbilt and nworth heavy trucks rned 50¢ a share, outstrip- g Wall Street's consensus imate by a full 15¢. Despite 8% drop in revenues, to 13.5 million, Paccar's profit nped 21%, to $17 million. With the recessionary mud ckmakers have been mired Paccar's numbers are im- essive. Since 1988, unit es of heavy trucks have nk steadily and figure this ar to plunge to about ,000, from 121,000 in 1990, ys Steven J. Colbert, a Pru- ntial Securities Inc. analyst.

PROFITS AT PACCAR, MAKER OF PETERBILT TRUCKS, HAVE JUMPED 21%

For example, Paccar rival Navistar International Corp. lost $31 million in the quarter on an 11% drop in revenues.

But while Paccar cited a steadily improving economic climate for its gains, analysts aren't exactly sanguine. Insists Colbert: "It doesn't indicate a major turn in truck manufacturing." Indeed, some question whether Paccar can sustain momentum in its heavy-truck business, which makes up 85% of total revenues. "They did some discounting in May and June, and it resulted in a lot of orders that they shipped in the third quarter," says Mitchell I. Quain, an analyst with Wertheim Schroder & Co.

MEXICAN LUCK. As a result, Quain believes the fourth quarter might be unusually soft. Further, the company's nontruck businesses, including a chain of auto-parts stores and an oil-field equipment business, contributed more to the bottom line last quarter than in past periods. The company would not comment.

Much of Paccar's recent good fortune originated in Mexico. The reviving economy there is stoking demand for trucks. VILPAC, Paccar's 49%-owned Mexican partner, makes Kenworth trucks and is running full out. Paccar in September announced it will invest more than $60 million to update that plant. Of all international markets, "Mexico has the greatest potential over the next four to five years," says a Paccar rival, who predicts some 4,000 Kenworths—twice last year's level—will be sold there in 1991.

James L. Hebe, executive vice-president of Freightliner Corp., says his Portland (Ore.) company is doing well in the U.S. by cutting costs and adapting to customer service demands. But he concedes the forecast is gloomy: "I don't see truck sales picking up for at least six months." So for Paccar, the word is still "caution—more curves ahead."

By Joan O'C. Hamilton in San Francisco

	Profits $ mil.	% chg. vs. 1990	Margins 1991	Margins 1990
8	75.9	-39	3.1	4.7
1	379.4	+22	14.0	11.7
1	290.0	-45	4.1	6.7
5	70.3	+7	2.0	2.1
1	-1,799.0	NM	NM	7.4
0	382.7	+7	12.3	11.6
2	352.4	-13	9.7	11.3
4	9.7	-47	0.9	1.4
9	27.4	+43	11.9	11.6
5	563.4	+14	20.4	18.9
0	54.0	-25	4.5	5.9
6	-37.0	NM	NM	1.9
5	313.0	-22	3.1	3.8
6	-885.0	NM	NM	2.4
4	456.3	+16	14.4	14.1
3	-146.6	NM	NM	5.8
8	-70.3	NM	NM	14.3
4	17.4	-57	4.4	10.7
9	104.5	+1	10.8	11.7
3	-11.8	NM	NM	NM
8	223.0	-21	5.0	5.8
0	16.0	-33	3.9	5.8
8	-574.4	NM	NM	0.4
1	59.5	-25	7.3	9.6
8	64.0	+7	3.1	2.6
4	1,042.0	+2	7.1	7.3
6	-1,056.7	NM	NM	NM
3	-27.0	NM	NM	2.8
1	104.1	+13	9.1	9.0
2	52.3	NM	1.8	NM
6	172.0	-85	1.2	7.3
7	201.7	+17	17.0	17.0
1	109.0	-40	3.3	5.5
0	363.0	+16	11.6	11.1
1	172.4	+6	11.4	12.0

	Sales $ mil.	% chg. vs. 1990	Profits $ mil.	% chg. vs. 1990	Margins 1991	Margins 1990
LIZ CLAIBORNE	558.4	+12	65.7	+5	11.8	12.5
LOTUS DEVELOPMENT	218.8	+37	21.5	+151	9.8	5.4
MARRIOTT	1,835.0	+11	18.0	-33	1.0	1.6
MARTIN MARIETTA	1,436.8	-4	100.1	-8	7.0	7.3
MAYTAG	729.5	-7	24.2	+5	3.3	2.9
McDONALD'S	1,736.6	-2	258.7	+7	14.9	13.7
McDONNELL DOUGLAS	4,467.0	+9	78.0	-69	1.7	6.1
McGRAW-HILL	489.5	-3	55.1	-18	11.2	13.4
MCI COMMUNICATIONS	2,148.0	+7	140.0	NM	6.5	NM
MERCK	2,117.5	+11	552.4	+19	26.1	24.3
MERRILL LYNCH	3,037.5	+7	160.2	+248	5.3	1.6
MINNESOTA MINING & MFG.	3,378.0	+1	296.0	-12	8.8	10.1
MOBIL	15,025.0	-8	365.0	-4	2.4	2.3
MONSANTO	2,042.0	-5	116.0	+57	5.7	3.5
MORGAN STANLEY	1,738.4	+12	121.8	+69	7.0	4.6
MOTOROLA	2,745.0	+2	93.0	-9	3.4	3.8
NYNEX	3,271.6	-3	291.8	-2	8.9	8.8
PACCAR	613.5	-8	17.0	+21	2.8	2.1
PACIFIC TELESIS	2,499.0	+1	275.0	-4	11.0	11.5
PEPSICO	4,881.3	+9	284.4	-19	5.8	7.8
PHILIP MORRIS	11,791.0	+6	1,131.0	+21	9.6	8.4
RAYTHEON	2,235.0	0	148.4	+8	6.6	6.2
REEBOK INTERNATIONAL	764.3	+30	66.2	+62	8.7	7.0
RJR NABISCO	3,763.0	+7	123.0	NM	3.3	NM
SCHLUMBERGER	1,470.1	+11	196.3	+33	13.4	11.1
SEARS, ROEBUCK	14,300.0	+2	150.3	-16	1.1	1.3
SOUTHWESTERN BELL	2,423.8	+2	363.1	+12	15.0	13.7
TEXACO	9,356.0	-15	286.0	-25	3.1	3.5
TEXAS INSTRUMENTS	1,699.0	+1	-113.0	NM	NM	NM
TEXTRON	1,906.1	0	75.7	+14	4.0	3.5
TRW	1,896.0	-6	32.0	-30	1.7	2.3
UNION PACIFIC	1,743.0	-2	-406.0	NM	NM	9.0
UNITED TELECOMMUNICATIONS	2,213.5	+5	96.8	+8	4.4	4.3
US WEST	2,616.9	+5	269.3	-11	10.3	12.2
WESTINGHOUSE ELECTRIC	3,426.0	+8	-1,482.0	NM	NM	8.0

NM = not meaningful

DATA: STANDARD & POOR'S COMPUSTAT SERVICES INC

STEVE WINTER B&A

STRATEGIES

THE HUMANA FLAP COULD MAKE ALL HOSPITALS FEEL SICK

Congress and the GAO are investigating pricing practices

CEO JONES FACES A CONGRESSIONAL GRILLING ABOUT THE HOSPITAL CHAIN'S CHARGES

Few can fault the business results of Humana Inc. On Oct. 15, the Louisville-based hospital giant reported yet another record year (charts). And after an initial stumble, it has defied the odds by building a major, profitable health insurance arm to round up patients to feed into its hospitals. Says analyst Kenneth S. Abramowitz of Sanford C. Bernstein & Co: "It's a great company in a tough business."

But is Humana making too much money at the expense of its patients and policyholders? That's the question that has been bobbing around Capitol Hill these days. On Oct. 17, Representative John D. Dingell (D-Mich.) summoned Humana Chairman David A. Jones to hearings to defend what appear to be particularly aggressive billing practices. The move comes atop flaps in Nevada, Florida, and Kentucky over various aspects of Humana's pricing and marketing practices. And it's all adding fuel to a growing debate in Congress over how hospitals in general allocate costs and charge for services.

HORRIFIC MARKUPS. Jones was called by Dingell's House Energy & Commerce Committee after charges of Humana bill padding were aired by ABC's *Prime Time Live* news show. Armed with price lists from Humana's 77 U. S. hospitals, Dingell's investigators ticked off horrific markups: saline solutions costing 81¢ per liter charged to patients at $44.90; crutches that cost Humana $8.05 and were billed at $103.65. Said Dingell: "The now-famous $640 Pentagon toilet seat pales in the face of some of these hospital charges."

Jones had ready answers. Most customers, he said, do not pay inflated prices since their health insurers—whether they are covered by medicare or a private plan—are able to negotiate healthy discounts with hospitals. To make up the difference—and to cover the care of indigent patients and others who pay little, if anything—hospitals routinely shift costs to customers wi pay full rates. Moreover, Jones sa markups also include allocated overhe costs. In any event, Humana is mere following standard hospital practice, concluded.

Some experts agree, saying that f cusing on pricing of services alone d torts the picture. "I think we need calculate the returns hospitals are ma ing rather than individual prices," sa Frank A. Sloan, a Vanderbilt Universi economist.

One thing's certain: Humana is high profitable. While the company's hospit margins have slipped from 21% to 17 since 1987, they still are above averag Overall, earnings have grown at steady 18% compound annual clip ov the past four years. Humana's 20% ave age return on equity over that peri leads the lucrative health-care indust in general by several percentage poin

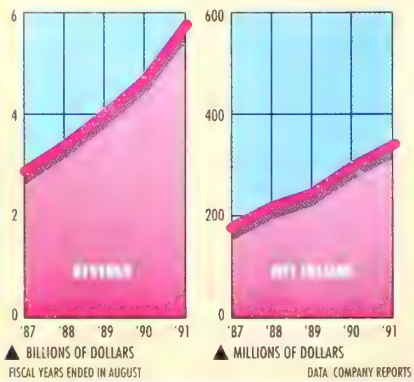
NO STRANGER. Whether the Ding hearings will have any real impact Humana's business is unclear. But source close to the Energy & Commer Committee says Dingell plans to expa his probe. Meantime, both the Gener Accounting Office and the Inspect General of the Health & Human Se vices Dept. are looking into hospital pr ing practices industrywide. The que tion: Are hospital pricing systems th cross-subsidize costs fair to the consu er? Theoretically, Congress could se to regulate those systems.

Humana is no stranger to controve sy. It had to make changes in its prici or marketing practices in Florida a Nevada in response to pressure fro state officials. And down home in Ke tucky, the company and its pricing ha become "the favorite topic," as one sta senator puts it. Indeed, the pricing fl has cost it some of its clout with t legislature. Senator Dan Seum, a Lou ville Democrat who co-sponsored a b favorable to Humana last year, no wonders if the company should be su ject to price controls of some kind.

Humana may emerge from the cu rent controversy with little permane damage. Wall Street has bid its sto down 23% to about 26 since the end July. But analysts say that's due mo to general concerns about the future e vironment for hospitals than to any co troversy over Humana's pricing pr tices. Nevertheless, as the leading f profit hospital chain—and a compa that's not bashful about flexing its mu cles—Humana is going to be a tempti target for state and federal legislato concerned about rising health care cos

By Zachary Schiller in Cleveland, w Susan Garland in Washington and Ju Flynn Siler in Chicago

HUMANA IN THE PINK



FISCAL YEARS ENDED IN AUGUST

DATA: COMPANY REPORTS

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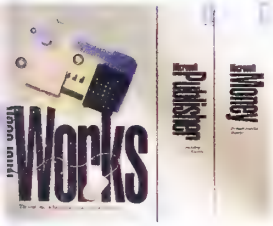

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PRODUCT DEVELOPMENT

WORKING ON A CLAY-MODEL VIPER: THE DEVELOPMENT TEAM WAS KEPT DOWN TO 85 PEOPLE

THE RACY VIPER IS ALREADY A WINNER FOR CHRYSLER

However it sells, the car taught the company plenty about development

Car buffs got their first look at Chrysler Corp.'s Viper in January, 1989, at the North American International Auto Show in Detroit. The curvaceous show car drew huge crowds, and Chrysler President Robert A. Lutz quickly gave the preliminary O. K. to develop a mass-production version. But he set strict guidelines. Get the Viper ready in three years, he ordered—two years faster than usual for Chrysler. And he set the development budget at just $70 million, 45% less than Mazda Motor Corp. spent on its Miata roadster.

Now, with the first Vipers starting down the assembly line on Nov. 18, the car looks like something of a milestone. The $50,000 model's sales won't be large—Chrysler plans to build only 200 Vipers next year, rising to 3,000 annually in the mid-1990s. But the sexy two-seater should draw car buyers into showrooms—which is crucial, because Chrysler can't live off hot minivan sales forever. Chrysler's car market share fell again in the 1991 model year, to 8.9%. And for the first time, Japan's Honda Motor Co. passed its U. S. car sales.

However the Viper sells, Chrysler used the car as a laboratory for learning efficient new development techniques. With the company's losses through Sept. 30 estimated at about $1 billion, that could be key to helping troubled Chrysler st independent. "There just aren't the mo ey, the people, or the time to do it t old way," says David E. Cole, director the University of Michigan's Center f the Study of Automotive Transportati

TOGETHERNESS. Chrysler already adapting some of the lessons it learn on the Viper to its new LH line of m size cars, due out next year. But Lu admits that "by Japanese standar there's still a lot of waste" in the program. On later models, he says, ing Viper-style development will costs dramatically. He claims Chrys will develop its new PL subcompact li due out in 1994, for just one-third of t $2 billion Ford spent redoing its Esc in the late 1980s. Viper also is helpi cut costs on the new JA compact line d out in 1995, he says.

What's the secret to the savings? developing the Viper, Chrysler fully e braced the simultaneous engineeri techniques pioneered in Japan. Th meant forming a small team compos of specialists in engineering, manuf turing, and marketing, as well as outsi suppliers. The teams performed develo ment tasks together, avoiding, for exa ple, the need for designers to keep ma ing changes after manufacturi engineers couldn't produce what h been asked for. Most glitches were a dressed early on. Chrysler also cut co by having Viper suppliers engineer k components such as the transmissio More than 90% of the Viper's parts w come from suppliers, vs. 70% for a ty cal Chrysler.

To cut bureaucracy, the Viper was d veloped as a lean "skunkworks" proje The model has a development team just 85, hundreds fewer than most D troit projects. In contrast to Detroi usual cumbersome hierarchy, the tea works out of a big open room on D troit's west side, where Chief Engine Roy H. Sjoberg mingles with other me bers, making decisions on the spot. Th makes for nimbleness. In January, Lu

THE VIPER: ZOOMING FROM A STANDING START TO THE SHOWROOM

JAN. 4, 1989 Viper show car unveiled at Detroit's annual international auto show

MAR. 28 Viper feasibility study launched

DEC. 15 V-8-powered prototype completed

APR. 15, 1990 V-10-powered prototype done

MAY 18 After a Viper test drive, Chairman Lee Iacocca gives final go-ahead

AUG. 29 First crash test

JAN. 10, 1991 Chrysler President Robert Lutz scolds team for being behind schedule with a car that's 200 pounds over its 3,000-pound goal

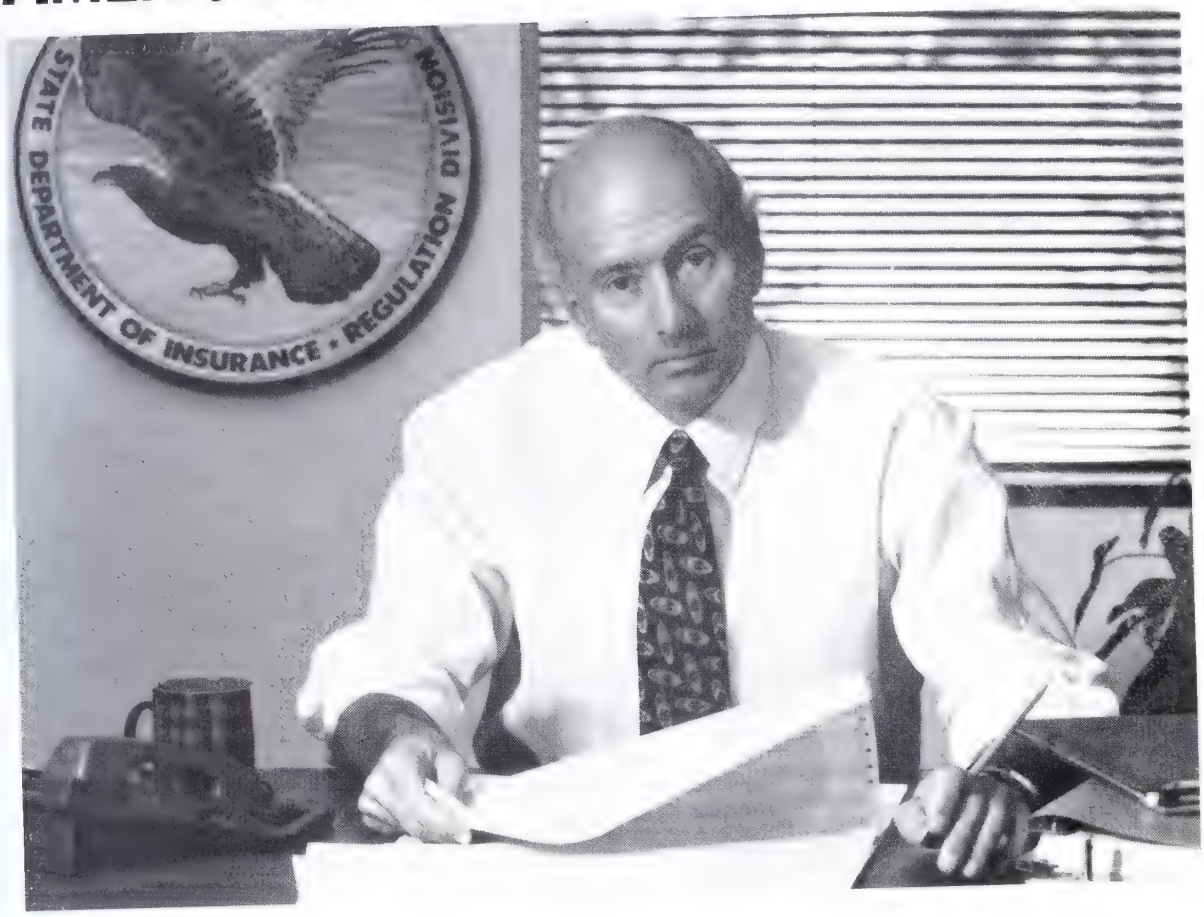
MAY 26 Viper paces Indianapolis 500 with racing great Carroll Shelby at the wheel

NOV. 18 Production starts, with first models expected off the line by Dec.

MARCH, 1992 Deliveries of cars to customers scheduled to begin

DATA: BW

AMERICA'S "EAGLE EYES" ARE ON US.



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griped that the car was late and too heavy. But since then, the team has scrambled back to meet its original timetable. The team plans to trim the Viper's weight with steps such as making body panels thinner after production is begun.

Developing the Viper required tight cooperation with labor. The development team includes six workers who have built all the Viper prototypes, including one that paced the Indianapolis 500 on May 26. These workers will lead assembly teams at Chrysler's New Mack Manufacturing plant in Detroit, where 120 skilled assemblers will build the cars.

WINDSHIELD VIPER. The Viper also uses innovative materials and production tricks. For instance, supplier Guardian Industries Corp. helped perfect a "press bent" windshield that avoids the optical distortion common in the corners of dramatically curved glass. Chrysler plans to use the new glass in its LH sedans. And the Viper is the first Chrysler with an all-plastic body. The innovative resin-transfer molding process being pioneered in the U. S. by Chrysler and its suppliers saves bundles: Epoxy molds used for most body panels cost 90% less than steel ones used with sheet metal.

All that said, Viper's success is far from assured. Its appeal lies in its sleek lines, a brutish new 400-horsepower V-10 engine, and the road-holding grip of a race car. Sjoberg promises that the Viper will be able to jump to 100 miles per hour and then slam to a stop in less than 15 seconds—a feat few cars have ever matched. But the Viper is austere next to a $65,000 top-end Corvette. It has none of the high-tech goodies, such as all-wheel drive and electronically controlled suspension, that most high-dollar sports cars have. It doesn't even have roll-up windows: There are 1950s-roadster-style snap-on side curtains instead.

Moreover, Detroit's track record with pricey two-seaters hasn't been good. Chrysler flopped with its $37,000 TC, designed by Italy's Maserati: It looked too much like a $17,000 Le Baron convertible. Cadillac's $58,000 Allante, introduced in 1987, has never sold well. And Buick finally pulled the plug on its money-losing Reatta earlier this year.

Chrysler figures, though, that the Viper will boil the blood of enough auto enthusiasts at least to sell out the first few years' production. The carmaker has to sell only 2,000 Vipers annually for a few years to break even, Lutz says. Chrysler is already hinting that it will bring out other niche models—it won't say what kind. So even if sales fizzle, the lessons Chrysler learned will still make the Viper worth the trip.

By David Woodruff in Detroit

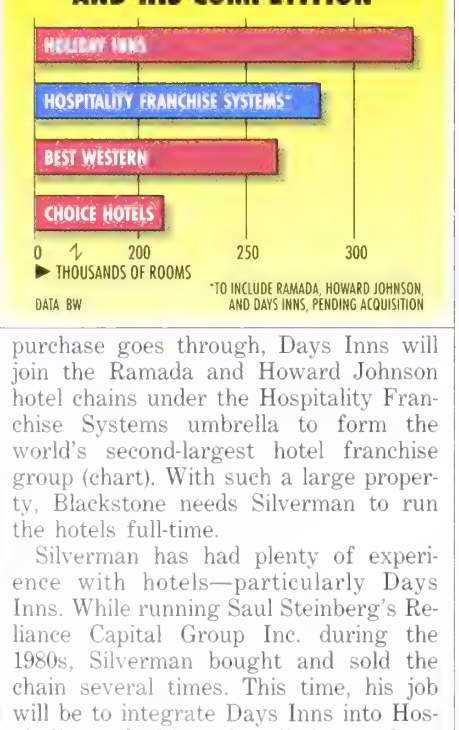
DEALS

HE BUILT A HOTEL CHAIN. NOW HE HAS TO RUN IT

Can Blackstone dealmaker Henry Silverman whip the inns into shape?

Just two years after joining Blackstone Group to run its $850 million buyout fund, Henry Silverman is leaving the Wall Street investment boutique. Come January, say several knowledgeable sources, he'll give up his Blackstone partnership to serve as chief executive of Hospitality Franchise Systems—a hotel group Silverman put together with Blackstone money in 1990.

Blackstone, run by founding partners Peter Peterson and Stephen Schwarzman, is said by many on Wall Street to have a revolving door. But Silverman's move is probably driven by unique circumstances: Blackstone's planned purchase of bankrupt Days Inns Inc., for which it recently bid $250 million. If the purchase goes through, Days Inns will join the Ramada and Howard Johnson hotel chains under the Hospitality Franchise Systems umbrella to form the world's second-largest hotel franchise group (chart). With such a large property, Blackstone needs Silverman to run the hotels full-time.



Silverman has had plenty of experience with hotels—particularly Days Inns. While running Saul Steinberg's Reliance Capital Group Inc. during the 1980s, Silverman bought and sold the chain several times. This time, his job will be to integrate Days Inns into Hospitality and ultimately sell the hotels at a profit for the Blackstone fund's investors. That'll be a stiff challenge. In light of the current hotel slump, some think Blackstone overpaid when it bought Ramada and Howard Johnson for $200 million in 1990. One former Blackstone executive likens Silverman's new position to "cooking in his own soup."

Of course, there's a heavy incentiv for Silverman, too. He'll get options purchase a chunk of equity in Hospita ity. Assuming Blackstone later succee in taking Hospitality public or selling Silverman could reap a hefty profit f his portion. Neither Silverman n Schwarzman, Blackstone's CEO, wou comment for this article.

COMPLEX TIES. The plan represents a m jor change. Silverman has held the C title at Hospitality since he created t hotel group, but until now, he had spe only Mondays working out of Hospit ity's offices. The bulk of his time w devoted to scouting out new investme opportunities for the $450 million r maining in Blackstone's fund. It's n clear who will manage the fund no Nor is it certain what effect his depa ture will have on Blackstone's pendi joint bid with Time Warner Inc. for S Flags Corp. The deal involves a compl arrangement—designed largely by S verman—whereby Time Warner has o tions to buy Blackstone's stake later.

Silverman has been known to cla with Schwarzman. But whether that fluenced his departure is also uncle This summer, Silverman described relationship with Peterson—a form Commerce Secretary—and Schwarzm this way: "I tell them what I'm doing they're not directly involved."

Why is Blackstone known for its volving door? Several former Blackst employees claim Schwarzman and Pet son have created an environment th produces frequent defections—mainly the middle ranks. But partners have le too. Former Metropolitan Transit A thority Chairman Richard Ravitch came a general partner in 1990, only resign quietly in 1991. General partn Steven Winigrad left in December, 19 after 21 months. Says one former e ployee: "When Henry joined, I thoug boy, he has really sublimated his ego because Steve and Pete really make y feel like hired help. For Henry in part ular, that had to chafe."

Chafed or not, Silverman will still closely tied to Blackstone by the ho venture. And everybody involved mu agree that making that work—no matt how bad the economy is—has to be t No. 1 priority.

By Andrea Rothman in New Yo

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THE ARTS BUSINESS

ALL THE BUTTONS IN ONE BASKET

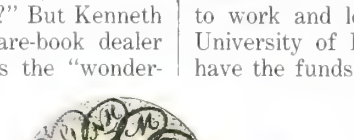
Sotheby's rolls the dice offering 20,000 Presidential items in a lot

In the Chicago Board of Trade's wheat pit, Paul Perlin turns more than 100 trades a day—working for tiny profits that might add up to a fortune. Off the floor, though, he's going for the trade of his life: auctioning off his 20,000-item collection of Presidential campaign memorabilia—the largest in private hands—in a single lot. The presale estimate: $2.5 million to $3.5 million.

Perlin isn't the only one playing for high stakes. Sotheby's will wield the gavel on Dec. 12 in New York, gambling that a well-heeled individual or institution will buy a collection that includes items from every campaign from George Washington to Jimmy Carter. If the sale succeeds, interest in political collectibles could bloom, creating a new market for the auctioneer. If it fails, Perlin and Sotheby's may end up red-faced.

The Perlin collection mixes several types of artifacts: 11,000 buttons, 3,000 manuscripts, plus photos and printed materials. That cuts both ways. "It's like you're auctioning the rarest of three cats and the rarest of three dogs," says Robert Fratkin, a McLean (Va.) collector who has twice appraised Perlin's buttons. "If I'm a dog collector, what do I want with the three cats?" But Kenneth Nebenzahl, a Chicago rare-book dealer who advised Perlin, says the "wonderful" collection shouldn't be broken up: "It's a cultural property now."

Perlin, who got hooked in 1972 after buying a letter by Supreme Court Justice Louis D. Brandeis, admits he's more a buff than an investor. For the next four years, collecting consumed all his free time. Among his treasures: a rare autograph by William Henry Harrison, a scarce button showing the unsuccessful 1920 Democratic ticket of James M. Cox for President and Franklin D. Roosevelt for Vice-President, and pieces associated with Presidential assassins.



1789 WASHINGTON BRASS, 1920 COX-FDR BUTTON

Perlin won't say what he paid for any item. But during the height of his c lecting, he was the biggest factor in t market. "He wanted everything th ever existed," observes David J. Fre an Oakhurst (N. J.) dealer. Adds Fratk "Dealers were just jettisoning their ventory. Paul became a fatted calf."

'NO HUNT.' The spree stopped in 19 when Perlin began devoting more ti to work and lent the collection to t University of Kentucky—which does have the funds to bid. Budget proble may keep other insti tions away, too. So eby's is aiming for t private market, as it c last March, when it s 873 baseball cards $4.6 million. "It co appeal to the gray ar of collectors interest in something new," f ures Selby Kiffer, Sotheby's book exper

The trick is to find a buyer who wa a turnkey collection. That's not ea "The thrill is in the hunt," says T Hake, a York (Pa.) dealer. "This w there is no hunt." If such feelings p vail, Perlin's big score could be a bus

By David Greising in Chicago a Judith H. Dobrzynski in New York

REGIONS

IT'S A CRAPSHOOT FOR LOTTERIES

In a lagging economy, the thrill is wearing thin for bettors

Visions of multimillion-dollar jackpots dancing in his head, Daniel Van Dyke used to play California's lottery every week. But he never won much, and now the 26-year-old San Francisco computer engineer buys tickets just once a month—if at all. "It's the same game every time," he complains. "It gets a little boring."

California's lottery is on a wicked losing streak. Half-hearted players like Van Dyke are one big reason. Revenues fell 14%, to $2.13 billion, in the fiscal year ended last June (chart). This year, sales may not break $2 billion. It's not just fun and games at stake either: At least 34% of lottery proceeds go to schools. Last year's decline left them with $176 million less than expected, contributing to salary and job cuts at already strapped districts. A recent poll found 46% of the state's adults now have a negative opinion of the lottery, up from 21% in 1985.

California may be in the worst straits. But a weak economy is hitting lottery revenues across the nation. Sales by the 33 U. S. lotteries edged up only 3% in the last fiscal year, to $20.4 billion. That contrasts with 8% growth the year before and 25% annual growth through much of the 1980s, when lots of new lotteries were starting up. A drop in such a large, diverse state as California, however, has other lotteries wondering where the wheel of misfortune will stop next.

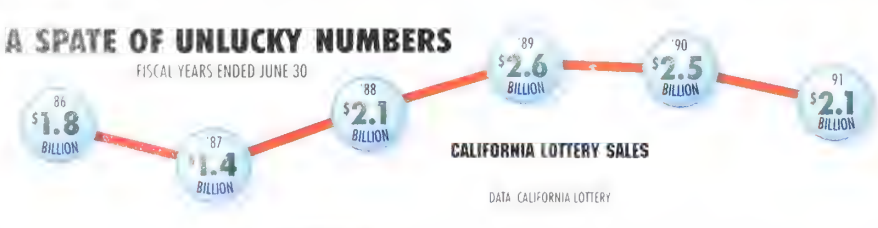
LONG ODDS. California's plight points up a basic problem that an economic recovery may not solve: Such games as high-jackpot "lotto" and small-payoff "scratch" cards are wearing thin for current players and aren't luring new ones. Says Los Angeles gaming consultant Saul F. Leonard: "I don't see any kind of significant growth."

The Golden State has placed its chips on a new lottery director, Sharon Sha On Oct. 17, the former Illinois lotte chief proposed sweeping changes. F one, she wants to make tickets easier buy. She plans to authorize new outl such as video rental stores and ban and she will install more ticket ter nals. She also plans to expand the nu ber of scratcher games, including on based on blackjack and other gambli themes, now barred. And she wants boost the maximum 50% of revenu that goes to scratcher prizes to off higher jackpots and better odds.

Mainly, though, she must spur n interest in lotto, which contributes 6 of lottery sales. Former Director Ch Gutierrez had tried to pump up inter with bigger jackpots. But despite l April's $119 million prize—a national r ord—the steeper 1-in-23 million char of winning turned off many players.

Next month, Sharp will make so specific recommendations. She wa that there are no quick fixes. "Once lottery has declined," she says, "it's v difficult to turn around." But Sharp has her w the California L tery won't be same old game long.

By Robert D. H in San Francisco



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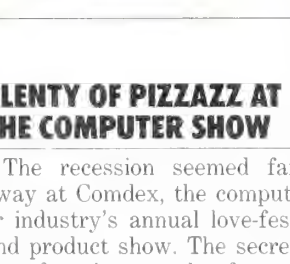
EDITED BY HARRIS COLLINGWOOD

ATTENTION, JOB-HOPPERS

Good news at the top of the corporate pyramid: The number of vacancies for executive talent rose 17% from the second quarter to the third quarter, according to Korn/Ferry International. These sectors showed the strongest increases



PLENTY OF PIZZAZZ AT THE COMPUTER SHOW

▶ The recession seemed far away at Comdex, the computer industry's annual love-fest and product show. The secret was focusing on the future, and the products that got everyone's attention were laptop computers. Clonemakers AST Research and Dell Computer grabbed a big share of the limelight with their new color laptops. The reason: unexpectedly low prices. Dell says it will sell its speedy, 7-pound color notebook for under $5,000, starting next year, about $2,000 less than expected. Pentops, laptop computers that can read handwriting, drew crowds, too, but there was less immediacy. IBM, for example, showed a prototype pentop, but wouldn't discuss its price or its availability.

FROM AUDI AND ALCOA: ALUMINUM LIZZIES

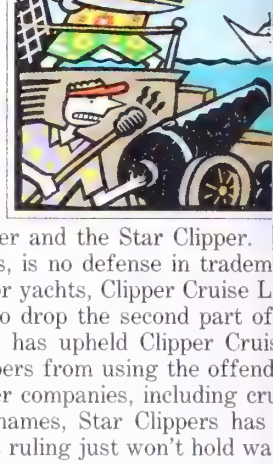
▶ Here come the first mass-produced aluminum cars. On Oct. 23, Alcoa unveiled plans to build a $70 million plant in Soest, Germany, to supply Audi with parts for an aluminum car expected in 1994. The two companies have been working since 1982 on a new manufacturing process for cars with aluminum structural components, or "space frames." The result: a 35% weight reduction. The peak production of 100,000 or so annually would far surpass the roughly 6,000 NSX aluminum sports cars built by Honda. Alcoa expects several more new plants.

THE OAKLAND FIRE'S AWFUL TOLL

▶ Fire officials and the insurance industry are toting up the cost of the disastrous fire that swept hillsides near Oakland, Calif. Besides causing at least 19 deaths, the fire destroyed nearly 2,500 homes and 440 apartments or condominiums, according to city officials. Among the three largest insurers in California, the still-growing claim numbers stood on Oct. 23 at $180 million for State Farm, $100 million for Farmers Group, and $93 million for Allstate.

Total estimates of damage varied. The city of Oakland sets the tab at $5.2 billion, including damage to both public and private property. The insurance industry, through the Property Claim Services Div. of American Insurance Services, has a much smaller preliminary estimate of $1.2 billion in damage to insured property. Based on that number, the insured damage from catastrophes so far this year stands at $4 billion, second only to the record $7.6 billion run up in 1989, when Hurricane Hugo lashed the East Coast and a severe earthquake rattled the San Francisco Bay area.

MAYBE THE 'YANKEE CLIPPER' SHOULD SUE



Webster's defines "clipper" as "a fast sailing ship; one with long, slender lines, an overhanging bow, tall raking masts, and a large sail area." Because they "clipped" sailing times, the vessels briefly dominated shipping in the mid-1800s. The ships have long fascinated Mikael Krafft, founder of Miami-based Star Clippers, and they were the model for his two 180-passenger sailing cruise ships, the Star Flyer and the Star Clipper.

But nautical precision, it seems, is no defense in tradem law. A St. Louis operator of motor yachts, Clipper Cruise L is trying to force Star Clippers to drop the second part of name. A St. Louis federal judge has upheld Clipper Cruis complaint and enjoined Star Clippers from using the offend word. Noting that dozens of other companies, including cru lines, include "clipper" in their names, Star Clippers has pealed. Krafft figures the judge's ruling just won't hold wa

MORE ALARMS ABOUT THE OZONE LAYER

▶ Scientists have realized for months that the earth's protective ozone layer shrinks over the U. S. during winter and spring, but on Oct. 22 came even more sobering news. An international panel of researchers announced t there has also been an oz decline in summer of ab 3% since 1979. Since stratospheric ozone la helps screen out damaging traviolet rays from the s the loss of ozone in summe when UV light is the str gest—could lead to thousa of additional cases of s cancer.

Last year, industrial tions agreed to stop us ozone-depleting chlorofluc carbons by 2000. But the r findings are speeding thi up. Du Pont said it would s selling the chemicals to ind trialized countries by 1996.

ARE BANKS GUILTY OF DISCRIMINATION?

▶ New data from the Fede Reserve Board confirm w minority home buyers h known for decades: It's eas to get a mortgage if you white. In 1990, lenders rej ed 33.9% of black applica 21.4% of Hispanics, and 14 of whites. The results w similar for all comparable come levels. But bankers s the data didn't take into count such factors as cre history and financial ass which they say could expl the different approval rate

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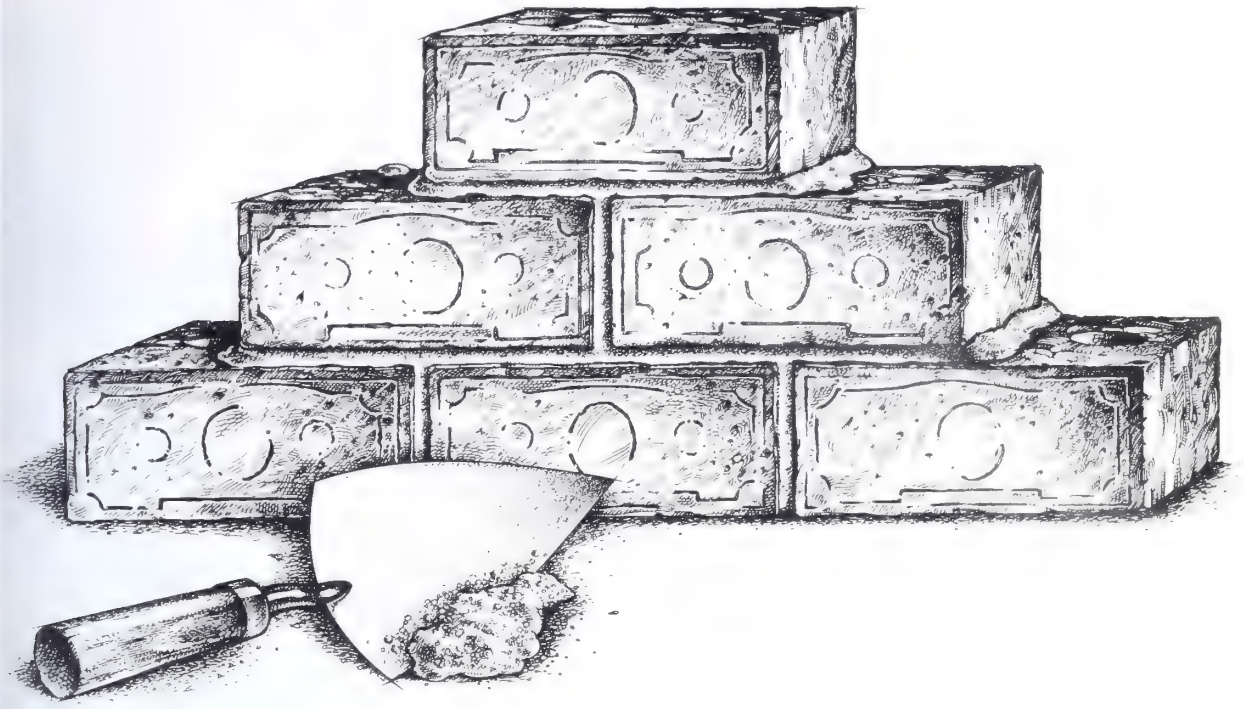

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EDITED BY STEPHEN H. WILDSTROM

HE DEMOCRATS' NEXT SLIP OULD BE ON ALASKAN OIL

emocrats' efforts to keep Clarence Thomas off the U. S. Supreme Court flopped. The party fell short in its attempt to give new jobless benefits to victims of the ssion. Now, the latest stab at confrontation with the White se, the attempt to craft a Democratic energy policy, may ndone by the party's old bugaboo: disunity.

ıe stumbling block to a united stance on legislation pro- ng U. S. energy independence is a proposal to allow oil ng in the Arctic National Wildlife Refuge, 2,400 square s of Alaskan wilderness. Supporters of drilling argue that ing the refuge's reserves is vital to reducing U. S. depen- e on imported oil. But environmentalists maintain that the ın't worth the environmental risk.

nate Energy & Natural Resources Committee Chairman ennett Johnston (D-La.) tried to make the measure more table to his fellow Democrats by shifting the emphasis ırd conservation. But he didn't go nearly far enough to fy liberals and environmentalists. "Why have a bill that ıorts to be a Democratic proposal that probably won't be ıorted by a majority of Democrats and closely resembles President's energy strategy?" asks Senator Paul D. Well- e (D-Minn.).

rilling in the refuge isn't the bill's only controversial provi- . The measure would ease restrictions on wholesale mar- ıg of electricity, speed up the licensing of nuclear power ts, and streamline the approval of natural-gas pipelines.

ıt the Alaska refuge is the big sticking point, and as the ıte prepares to take up the bill, the rift is deepening. At a nt closed meeting of the Senate Democratic Policy Com- ee, several colleagues attacked Johnston for supporting an ınistration program. At least eight Democrats, including ronmental protection subcommittee Chairman Max S. Bau- (D-Mont.), are threatening to filibuster the bill because of ilt toward production. "A huge controversy rages around Arctic, stopping everything else," declares Senator Timo- E. Wirth (D-Colo.), one of the potential filibusterers.

ow, Johnston is trying another route to appease conserva- advocates by offering an amendment that would raise fuel-economy standards for cars. But that might not be enough to placate opponents, either.

Supporters of the bill probably have enough votes to cut off any filibuster. The final vote on drilling will be close. But lack of a coherent Democratic position on the energy measure probably means that the bill will emerge from the Senate in a form that George Bush likes—and will give the Administration a strong hand in the battles to come with the House.

By Peter Hong

BACK TO THE FUTURE ON STUDENT LOANS?

For months, the debate over the future of the govern- ment's popular guaranteed student-loan program pitted Democrats, who want a big program for the middle class, against the Administration, which favors a more modest plan with stricter eligibility cutoffs based on income. But as Congress considers action, another issue has emerged: What role should the private sector play in making the loans?

The measure pending in the House would make the government the lender, taking banks out of the business of originating the subsidized loans. Sponsors say this could save the government $1 billion a year—money that goes to banks as a special allowance. The draft Senate bill keeps the banks in the picture, but some members of the Labor & Human Resources Committee, led by Paul Simon (D-Ill.), want direct lending.

Although the idea of government lending was first broached by the Administration, the Education Dept. is now calling for a veto of any bill containing such a provision. That's good news for the Student Loan Marketing Assn., which has built a $3.6 billion business buying guaranteed loans from banks and repackaging them for investors. Sallie Mae's stock, which slumped as the direct-loan idea gained strength, rose 3⅛, to 61⅝, on the Oct. 21 veto threat.

By [illegible] Del Valle

ITAL WRAPUP

VIL RIGHTS

ongress may finally do unto itself as it has long done to others. Dur- the Clarence Thomas confirmation arings, it was widely noted that Cap- l Hill had exempted itself from pro- ıitions on sexual harassment, as well most other rules it has imposed on ıployers. But an amendment to the il rights bill, which the Senate began bating on Oct. 23, would give Con- ess' 33,000 employees the same pro- tions as other private-sector and vernment workers. Since lawmakers ve always been reluctant to let other encies poke into their business, ey're still likely to bar the Equal Employment Opportunity Commission from investigating complaints on the Hill. Instead, workers would first have to go to in-house panels, then could take their cases to court.

TAXES

House Minority Whip Newt Gingrich (R-Ga.) wants to get even with Congress' Joint Taxation Committee. Its professional staff has been a bone in the throats of both Treasury Dept. officials and Hill Republicans by insisting that a capital-gains tax cut would lose revenue rather than produce it. Gingrich will try to eliminate funding for the committee in the next legislative appropriations bill.

SYNDICATION

Representative John D. Dingell has ridden to the rescue of U. S. television networks. They're now likely to get more control over foreign syndication of reruns. Since spring, the Michigan Democrat has been grumbling about Federal Communications Commission rules that allowed the nets into the syndication business. Dingell, whose Energy & Commerce Committee oversees the FCC, feels that the rules give foreign-owned studios an advantage over the U. S.-owned nets. An FCC source says the agency will soon issue new rules putting the networks and studios on a more even footing.

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HE FREE-MARKET ENFORCER VHO'S SHAKING UP EUROPE

ompetitiveness czar Leon Brittan steps up his attack on trusts—but he's facing a fierce backlash

With unification just around the corner, the European Community decided last year that it ed strong antitrust rules so the free et could prevail. The EC got the . But it got something else it didn't ain for: Sir Leon Brittan, a trust- r *extraordinaire.*

recent months, zealous enforce- by the EC's competition czar has shaken boardrooms from Milan to Manchester. The 52-year-old British barrister is using his lawyer's savvy to push antitrust regulations to the limit. He's attacking everything from anticompetitive takeovers to unfair subsidies and price-fixing cartels (table). Brittan's mission is clear: force Europe to shed its protectionist ways. And now, the addition of the seven European Free Trade Assn. (EFTA) nations in the EC sphere is bound to fuel more of Brittan's free-market thinking, giving his high-gear campaign extra significance (page 50).

But Brittan, who comes up for reappointment as commissioner at the end of 1992, faces a tremendous backlash. Big fights loom over the fate of such monopolistic untouchables as steel, telephone service, and energy. Powerful corporations are plotting counterattacks. His ability to withstand the political firestorm could decide whether Europe's economic future will be as a free market or as a fortress for monopolies. That outcome will also determine Europe's ability to compete with the U. S. and Japan in coming years, Brittan believes.

STRONGHOLDS. In early October, Brittan wielded the year-old EC merger rules for the first time against big, state-owned protectionist strongholds. He nixed the proposed $200 million joint takeover of Canadian commuter-aircraft builder De Havilland by France's state-owned Aerospatiale and Italy's Alenia, arguing that the deal would give them two-thirds of the European market and would risk rubbing out competitors such as Holland's Fokker. The companies are fighting back by planning to become minority stockholders in De Havilland.

Sweet deals with governments are high on his hit list. He is investigating an Italian plan to give $2.8 billion in government handouts to Fiat to build a new auto plant at Melfi, in the depressed Mezzogiorno area. And British Aerospace PLC was ordered to repay a $75 million sweetener that he says it received from the British government to buy nationalized auto maker Rover Group PLC. By taking that action, Brittan was enforcing a rule he devised that requires governments in business dealings to act the way reasonable shareholders in a private company would.

Brittan is also enforcing higher standards of corporate behavior by attacking anticompetitive practices such as price-fixing. He ordered raids on papermakers, including Germany's Feldmuhle, that were suspected of price-fixing, and

WHAT THE EC'S TRUSTBUSTERS ARE DOING

- Stopped a $200 million takeover by France's Aerospatiale and Italy's Alenia of Canada's de Havilland, a Boeing subsidiary
- Investigating $2.8 billion in proposed state aid for a huge new Fiat auto plant in Melfi
- Investigating $312 million in proposed state aid for France's Thomson and an additional $815 million for Groupe Bull
- Ordered Procter & Gamble to change the terms of a joint venture with Italy's Finaf
- Fined Toshiba $3.6 million for prohibiting reexport by dealers of its toners within Europe and vetoed similar arrangements by Peugeot for autos

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ime you saw a asted 17 years?

ıdling. The result is truly amazing. You can respond confidently to virtually ' driving situation you might encounter.

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And while the competition remains relentless in their quest to catch us, we nain dedicated to building a car that's a few years ahead of them. Which means s chase might be just getting started, after all. The Accord EX. HONDA

Sweden's Tetra-Pak was fined $90 million for alleged abuse of a dominant position in soft-drink packaging. Procter & Gamble Co. has just been told to change the terms of a joint venture in disposable diapers with Italy's Finaf that would have divided up the EC market.

To the cheers of consumer lobbies, Brittan is going after companies that use exclusive distribution contracts to demand higher prices for the same goods that can be bought for less in neighboring countries. French auto maker Peugeot, for instance, was told it couldn't stop a French wholesaler from buying its cars in Belgium, where they cost less, and reselling them in France cheaper than Peugeot dealers.

And in a complete break with European practice, Brittan is encouraging European companies to step forward and rat on their rivals. That U. S.-style approach could give his campaign its biggest head of steam. France's Matra, for instance, filed a complaint about subsidies promised to Ford Motor Co. and Germany's Volkswagen to build a plant in Portugal.

ENEMIES. Brittan's tactics are becoming as controversial as his aims. Most business deals involving state-held companies are cooked up behind closed doors at national finance ministries. Brittan is demanding that state companies file annual reports listing their state subsidies. Corporate leaders claim this forces them to make public proprietary information.

The result is that Brittan's list of powerful enemies is growing by the day. The French went ballistic when the EC commission backed Brittan's ban on the De Havilland merger. Spluttered transport minister Paul Quilès: "If Brittan had intervened 20 years ago, we wouldn't have had Airbus or Ariane," referring to two successful aerospace consortiums that are heavily subsidized.

The political stakes are so high that even some of Brittan's usual allies are running for cover. Two key EC commissioners are backing Franco-Italian moves to blunt some of Brittan's powers. A proposal to be voted on Oct. 30 would allow any EC commissioner to quash a trust-busting probe in his jurisdiction.

Can the crusader's campaign survive? It seems it will. He has been backed by EC commissioners on all of his moves so far. Even if he's replaced next year, the spirit of the times is running his way. With EFTA members already on board and the old command economies of East Europe and the Soviet Union hammering on the door for admission, Europe simply can't slip back into its old bad habits.

By John Templeman in Bonn and Patrick Oster in Brussels, with Stewart Toy in Paris and bureau reports

EUROPE

SAS IS ALREADY SLASHING JOBS IN ANTICIPATION OF MUCH TOUGHER COMPETITION

TEARING DOWN EVEN MORE FENCES IN EUROPE

A historic 19-country accord will create a huge barrier-free zone

If you are worried about a Fortress Europe, relax: The European Community is moving the other way. That's one conclusion that can be drawn from the historic agreement signed on Oct. 22 between the EC and the seven-member European Free Trade Assn. Reached after two years of grueling negotiations, the pact commits EFTA members as diverse as Iceland and Austria to following the EC's 1992 single-market rules—in effect creating a 19-nation barrier-free zone of 380 million people.

The European Economic Area (EEA) agreement, which is still to be ratified by all the governments, will mean big changes in EFTA states such as Switzerland and Norway that have fenced off parts of their economies and societies. Governments will have to abolish most restrictions on investment and adopt EC product standards and policies on aid to industry. Yet the promise of free movement of goods, services, capital, and people within this enlarged Europe should make it easier for companies to operate across borders and should give a fillip to economic growth.

HANG LOOSE? Beyond the economic issues, the EEA pact raises difficult political questions, which will come to a head at the EC summit in the Netherlands in December. Most EC members favor a more unified Community, with a single currency and joint decisions on such sitive matters as foreign policy and fense. But Britain has opposed a st Brussels, arguing that the EC mus main more loosely linked to accon date potential new members.

The EEA deal could boost Brit case for a broader—not deeper—EC though the EC originally hoped the would forestall a rush of new applic for full membership, many EFTA n bers are now eager to join the EC cl lest they be bound by EC rules witho vote in deciding them. Indeed, Sw and Austria have already applied, Finland may follow suit next year. eral of these countries have pursu neutral political orientation diffe from the NATO core of the EC. And more members the EC lets in, the gre the difficulty it will have reaching consensus on thorny political and fense issues.

Now that the EC has embraced E it should be easier to welcome the tral European countries that are on doorstep. A more loosely strung Eu will be able to accommodate the poli and economic differences of th emerging democracies. Imagine problems if, following a North Amer free-trade pact, the U. S. were to tempt a political union with Mexico.

Still, Europeans will feel the impa

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the EC-EFTA accord well before these political issues are settled. Tougher EC competition will assail such cosseted industries in EFTA countries as retailing, construction, and banking. Europe's big banks and insurance companies, for example, will benefit, because they'll get to move into EFTA states with a single EC license. One industry certain to feel the winds of change is aviation. High-cost airlines such as Swissair and Scandinavian Airines System will have to follow the EC's gradual deregulation of the skies. In anticipation, SAS, for one, is slashing jobs. "There is no way, with the cost structure we had, that we could survive in a deregulated environment," says Vagn Sorensen, head of SAS's airline division.

Big EFTA multinationals, such as Sweden's Volvo and Switzerland's ABB Brown Boveri Ltd., have been prep for closer links with the EC for through acquisitions and joint ven in the Community. They will pro prosper, but smaller and midsize companies that haven't prepared headed for a shakeout.

By Mark Maremont and Richa Melcher in London

SOVIET UNION

WINTER IS COMING, AND THE SOVIET CUPBOARD IS BARE

Poor harvests and blocked supply lines may mean shortages and riots

BYELORUSSIA'S AMBER WAVES: AS PRICES SOAR, FARMERS ARE HOARDING GRAIN

Tensions are running high at Moscow's sprawling Gastronom food store near Byelorussia Railway Station. With coupons ready, two dozen people are lined up at the counter to get sugar rations they were supposed to have had three months ago. Management claims there's no sugar—but it turns out that 20 sacks of sugar have been hidden in the back. For hours, the angry crowd refuses to leave, forcing police to clear the store when closing time comes at 8 p.m.

As winter approaches, such scenes are becoming common. The question being asked in capitals from Brussels to Washington is: How bad will it get in the former Soviet Union? Mass starvation is unlikely. But a combination of poor harvests and breakdowns in food distribution will mean pockets of serious shortages throughout the country. The repercussions are being felt on world commodity markets. Plans are afoot for the U. S. to extend $1 billion in emergency food credits and aid, prompting American grain prices to shoot up.

Across the Soviet Union, cities loom as the most vulnerable spots. Perm, an industrial town in the Urals, already witnessed major protests when sugar supplies dried up. In Moscow, frustrated tipplers ransacked a liquor outlet that had no vodka. In Alma Ata and St. Petersburg, bread is running short. Most at risk are retirees, who struggle along on pensions of 140 rubles a month and can't afford the plentiful but expensive food in private markets.

The biggest immediate threat is a poor grain harvest, which many expect to come in at 170 million metric tons—down 22% from last year. Of that amount, about 70 million metric tons were to have been sold to state distribution agencies run by Moscow. But in the aftermath of August's failed coup, central authority has all but evaporated, allowing state and collective farms to sell what they please. By Oct. 1, they had sold only 35.4 million metric tons t government.

The rest is being hoarded by far in hopes of selling it privately lat higher prices. Since spring, for exa grain prices have jumped from 90 bles to 2,000 rubles a ton. And wit ruble losing value by the day, far are using grain to barter for cons goods, cement, or other items they

Yet state and collective farms d have adequate storage facilities and face big grain losses, as Vladimir khonov, a Soviet agricultural expert an Oct. 18 conference at the Geon Institute of Vermont's Middlebury lege. The resulting shortages touch off food riots by spring, he

RUMBLING BELLIES. In Russia, the populous republic, food supplies tight. Meat purchases for the first months of the year were down 20% dairy sales sank 15%. In more tha Russian cities, meat, butter, and v are being rationed.

Finding additional supplies will b ficult. Now that they've declared independence, such food-producing publics as Moldavia, the Baltic st the Ukraine, and Kazakhstan are tant to ship food to Russia, since want to feed their own people first. sian cities in the heavily industrial region, for example, used to get stock from the Baltic states. But ments have fallen off dramatically. republics are supposed to adhere to commitments to sell food or pay p ties in hard currency. But, says khonov, "a period has come whe agreements can be relied upon."

Western countries, fearful of the os that food shortages could spawn gearing up with emergency plans. U. S., Japan, the European Commu and Saudi Arabia have earmarked billion in aid and credits primarily food. But last year, when the situ was less than dire, the Soviets wolf: Much of the emergency foo sent by the West ended up waste absorbed by the black market. The tion now is figuring out how to help when it's really needed—and b it's too late.

By Rose Brady in Moscow and Galuszka in Middlebury, Vt.

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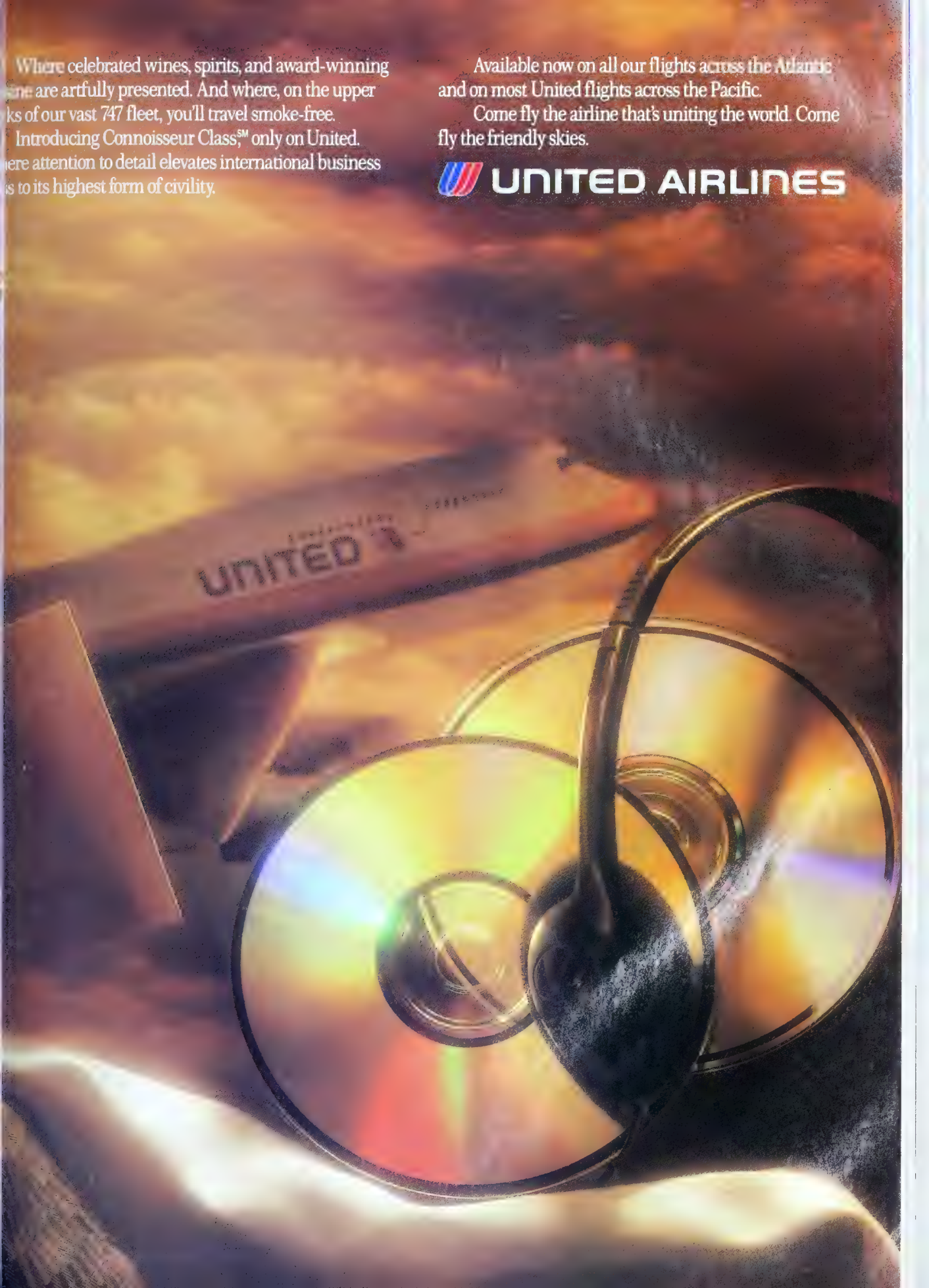
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AS CHINA'S ECONOMY WITHERS, REFORM MAY BLOOM AGAIN

Instead of enjoying their last years, 87-year-old Deng Xiaoping and China's other aging leaders find themselves scrambling to preserve their endangered legacy. The state sector of the economy, a major slab in the Communist Party's power base, is faltering badly—and it could drag the party down with it. The desperate need to come up with a rescue strategy has given economic reformers a new shot at power in the midst of the struggle over the succession to Deng.

The man with the greatest opportunity is Vice-Premier Zhu Rongji, whom Deng tapped in mid-September to try to straighten out the state companies. Zhu, a former mayor of Shanghai, is fondly remembered by the Western business community for single-handedly solving the foreign exchange problems plaguing the Beijing Jeep joint venture in the mid-1980s. He is known as "one-chop Zhu" for his quick decisions. If Zhu gets good marks in his new role, he could succeed the unpopular Li Peng as Prime Minister next year, putting him in line to head the party. Zhu has one rival, Vice-Minister Hu Qili, a slick politician, who also is trying to turn the public sector around.

STATE-MADE WASHERS: A SHODDY REPUTATION

But these ambitious reformers won't have an easy time. Chinese consumers are in the habit of shunning shoddy public-sector goods in favor of wares from the fast-growing private sector. They turn up their noses at panty hose that sag, bottle caps that don't screw on right, and car designs that never change. Stockpiles of unwanted cameras and TVs are filling warehouses.

Each year, the financially strapped government has to pump more money into the public sector to keep it going. Analysts say that 70% of large state enterprises are losing money, and the cumulative public-sector debt is at least $50 billion. But subsidies aren't enough to save the public sector. Because of its inefficiency and private enterprise's growth, the state trolled portion of gross national product has shriveled 60% to 45% since 1989.

How to revive state enterprise is a subject of fierce de among the Chinese leadership. Zhu and Hu want to fold of the money-losers into the few successful state compa And they would like to shut down some laggards to poor-performing managers a lesson.

Zhu's ideas are being put into practice on a limited s The government recently halted production on some lin Shanghai, Beijing, and Nanjing were notorious for turning out rior stuff. Innovative officials i province brought in Japanese agers to streamline a light bulb tory by firing workers and li pay to output.

BIG SPENDERS. But the old gua not ready for radical solutions a the board. They fear that large- layoffs at the state companies lead to unrest among the 100 m workers these operations em Another problem is that too reform would undermine the munist Party. "That's why they wary of economic reform," says a diplomat.

At the same time that a few companies are being closed government is spending big to shore up others. Some $1 b has been earmarked to purchase foreign equipment t grade state factories, and big write-offs of public-sector may be in the works.

But the reformers have gotten their feet back in the after being out in the cold since the 1989 Tiananmen Sq massacre. If they score big in one or two test cases, reformers' influence will increase. And they will be in pla fill the vacuum as the gerontocracy fades from the scen

By Lynne Curry in Beijing and Dinah Lee in Hong

GLOBAL WRAPUP

CANADA

Socialism is dying out in most nations, but it's gaining new life in Canada. The moderately socialist New Democratic Party (NDP) swept to power in elections in British Columbia and Saskatchewan and is poised to score well in the 1993 national elections.

The sweep also puts the NDP, which has ruled Ontario since last year and has long criticized Canada's free-trade accord with the U. S., in power in three provinces whose combined populations are about half of Canada's 26 million. So the NDP will have a pivotal role in the upcoming effort to resolve the constitutional crisis over Quebec—because any changes to the constitution must be approved by provinces representing a majority of Canadians. The NDP, which has alienated Ontario business leaders, wants to enshrine rights to government benefits such as health care in the constitution.

SCANDINAVIA

The Nordic countries are often dismissed as boringly stable, but right now they are staggering through a nasty financial crisis brought on by sour real estate loans and a vicious recession. The Swedish and Finnish governments have been forced into costly bank bailouts. But the crisis is most acute in Norway, where Christiana Bank, the country's second-la est, is likely to be nationalized as p of a broad rescue for the banking s tem. The bill for the government: billion. That may seem small, but i $700 per person—the equivalent nearly $200 billion for the U. S.

LATIN AMERICA

Latin leaders are putting the sque on Fidel Castro. The presidents oil-producing Mexico, Venezuela, Colombia summoned Castro to M co's Cozumel Island on Oct. 23 talks. The likely deal: political libe ization in Havana in exchange for which Castro desperately needs to place dwindling Soviet supplies.

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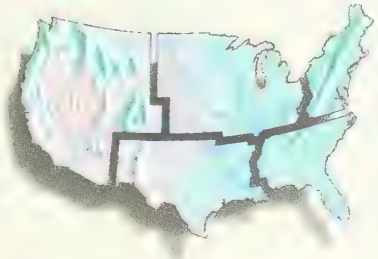

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THE EXPORT LESSONS TO BE LEARNED FROM GERMANY'S MIDSIZE COMPANIES

If you want to get a close look at Germany's export juggernaut, don't go any farther than the Glasbau Hahn factory on the outskirts of Frankfurt. Although it has only $12 million in sales, Glasbau Hahn is the Mercedes-Benz of glass showcases. Its products are jammed with technology to protect the world's most valuable art objects—such as the bust of Queen Nefertiti at Berlin's Egyptian Museum. Top-drawer customers such as New York's Metropolitan Museum of Art and London's British Museum eagerly fork out up to $100,000 apiece for custom-built wall-size showcases from Hahn, complete with heat-free, fiber-optic lighting and precision climate control. "Museums always ask us to do the impossible," says CEO Till Hahn.

About 300,000 other small and midsize companies such as Hahn—collectively dubbed the *Mittelstand*, meaning midranking—perform Mission Impossible on a daily basis. Although Dai
Benz and Siemens are best kn
abroad, it is these companies with
er than 500 employees that pro
two-thirds of Germany's gross nati
product, train 9 out of every 10 app
tices, and employ 4 out of every 5 w
ers. They make everything from
predictable motors and machine too
such consumer goods as camping e
ment and high-fashion garments. S
such as Krones, a maker of bottle

ing machines, have
ome major suppliers
J. S. industry. Says
us-Peter Müller, a
rd member of
nkfurt's Commerz-
k: "Germany's post-
economic miracle
a *Mittelstand* mir-
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he *Mittelstand* are
ajor reason Germa-
s likely to fare well
the 1990s, despite
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. They may even be
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ıe of the world's
ıest labor costs and
trong currency that
kes their exports
e expensive.

TER MODEL. In the
S., a small but growing number of
cutives and gurus think the *Mittel-*
nd provide a far more relevant mod-
or American exporters than the Jap-
se trading companies and industrial
ups often held up to business stu-
ts as organizations to emulate.

hat's because the U. S. has hun-
ds of thousands of small and midsize
ıpanies that, given the proper orien-
on and support, could become export
verhouses. "We've got this huge
size sector, but it falls through the
cks," says management consultant
n Peters, co-author of *In Search of*
ellence. "Before we leap overboard
say we require the Japanese model,
s look at the German model."

Inlike Japan's export leaders, the
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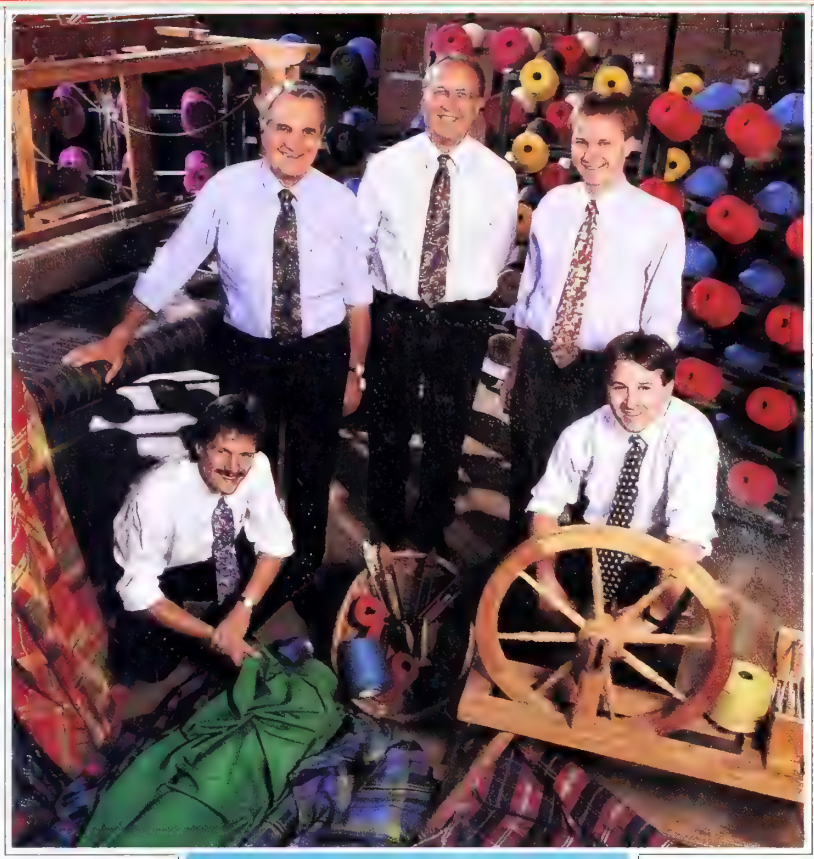


The Zuleeg family's textiles compete successfully with low-cost Asian rivals

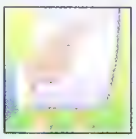
risks and unable to innovate. Pouring huge portions of their revenues into research and development, *Mittelstand* companies routinely beat the biggies to market with new products. One reason is that they are mostly run by owner-managers who have their families' wealth on the line. They are, says Bonn-based management consultant Wolfram Hatesaul, "the terriers of the German economy."

FREE SPIRITS. While a relative handful of U. S. companies accounts for the lion's share of exports, thousands of *Mittelstand* companies collectively generate 30% of German exports. To be sure, there are some who refrain from direct exports, choosing instead to give a helping hand to the big guys. Munich-based luxury-automobile manufacturer BMW, for instance, uses 1,000 suppliers. Daimler Benz's Mercedes-Benz auto and truck unit buys more than $15 billion worth of supplies annually from 50,000 companies inside Germany. That is similar to the Japanese model in which smaller companies supply big exporters in their *keiretsu*, or industrial group. But in contrast with Japan, the vast majority of *Mittelstand* companies are fiercely independent.

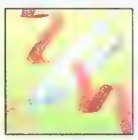
The economic payoff from these companies is huge. At $1.4 trillion, Germany's economy is less than a fourth the size of that of the U. S., and its work force of 34 million is dwarfed by America's 115 million. Yet year in and year out, Germany has vied with the U. S. to be top gun in the export battle. Now, with unification, it's pulling in front. Last year, Germany sold $421 billion worth of exports, comfortably ahead of America's $394 billion and Japan's $286 billion. Those numbers show that dominating hundreds of small niche markets works well for Germany.

Part of the *Mittelstand*'s success stems from the German business culture itself. Unlike their Yankee counterparts, *Mittelstand* chiefs aren't obsessed with quarterly earnings growth. Instead, they are devoted to quality,

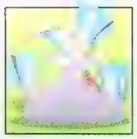
HOW GERMANY'S EXPORT NETWORK DOES IT



SPOTTING THE DEAL
Embassies, banks, trade associations, and chambers of commerce in dozens of countries funnel details of potential export deals to companies back home via newsletters, data bases



DOING THE DEAL
Trade associations, export trading companies, and banks help with documentation, translation, legal, and shipping services. They also provide office space and secretarial help in far-flung markets



FINANCING THE DEAL
Specialized banks or Mittelstand departments of big banks provide export finance and arrange credit and political risk insurance through government-backed Hermes export credit agency

PHOTOGRAPH BY PATRICK LABANCA; ILLUSTRATIONS BY ROB DOYLE BW

profits, and family ownership. They place a major emphasis on training apprentices. In their terms, success means handing a healthy company on to the next generation, not making a fast buck selling off shares to the public once they take off.

But aside from culture, the Germans also have built an export infrastructure that greatly assists smaller companies (table, page 59). Part of it dates back to the banking and trading system established during the last century, but other aspects developed during the grim days following World War II when Germany faced an export-or-die imperative. The result is a sort of "export CIA," peopled by diplomats, bankers, and trade-association officials, that helps spot, process, and finance export orders. German embassies aggressively promote exports, and industry associations, usually little more than lobbying groups in the U. S., pull out the stops to facilitate their members' sales overseas.

While experienced exporters soon come to rely on their own resources, the network gives neophytes a head start. "You don't have to pay—most of the information is free," says Andreas Mai, a German banker who helped the New York-New Jersey Port Authority's Xport trading company improve its export-promotion activities.

There is now an effort in some quarters of the U. S. to create the same kind of support system for an American *Mittelstand*. The thinking is that with a bit of tinkering, U. S. entrepreneurs and policymakers could give rise to a growing core of small and midsize companies that would be competitive in global markets. Already, a coalition of businesses, universities, and local governments in the Pittsburgh area is trying to build an export machine based on the German experience. From Oregon's sawmills to New Jersey's electronics companies, the Americans are quietly seeking lessons from the German experience (page 64).

Museums around the world pay up to $100,000 for Glausbau Hahn's showcases

A key factor in the German companies' success is a willingness to pour big money into R&D. Take Karl Mayer-Potschak and his cocoa-bean-roasting machinery. When the 51-year-old chief executive risked $1.8 million on complex new technology to boost the yields and fine- tune the temperature control of his machines during the 1980s, other makers were skeptical.

Now, his competitors are scrambling to catch up. Mayer-Potschak's Ludwigsburg-based G. W. Barth, the smallest company in the industry with 65 ployees, has 70% of the global ma up from 25% 10 years ago. Mayer- chak's infrared technology narr the variance in roasting tempera from 5C to 1C—a precision edge gave customers such as Ghira Chocolate Co. and Hershey Foods added control over the taste of chocolate. "Barth is really stron roasting machines," admits a Euro competitor.

RICH WATERS. Another tried-and *Mittelstand* strategy is to be the fish in small but ponds. Munich-b Panther, for exar and its high-tech e ment unit make stat the-art cameram chairs. They were first to install a con er in the chairs use filming movies—g photographers the ty to program chairs' movement. ther equipment ha ready been used string of hits, inclu *Working Girl Broadcast News.* T year-old company has 50% of the Eu an market for chairs and is battlin boost its 10% shar the U. S. "In 10 y I'll be the world lea says founder Erich surveying his w map on which co pins represent sales

Mittelstand co nies often take ideas to market so that they don't bo to patent them. For instance, mund-based Geers moved the wo smallest hearing aid, which uses crochip, from drawing board to shops in just nine months. The model, which first appeared in now generates 30% of Geers's $34 lion in sales. Geers, which claims mer President Ronald Reagan an its satisfied customers, is racing t new markets in the east, opening s in Kiev, Prague, and Warsaw. By trast, rival Siemens took nearly t years to get its micro hearing a market. "We don't need patents" that kind of competition, says o Volker J. Geers, also head of the the German Association of Entre neurs—a lobby for *Mittelstand* ow managers.

Mittelstand companies couldn't

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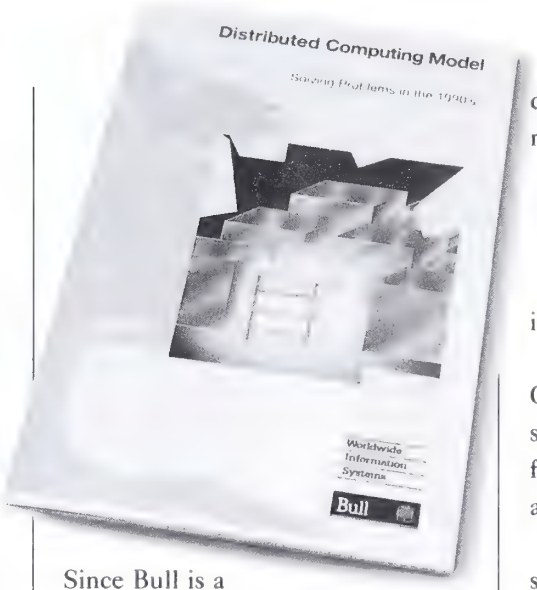

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in on their specialized products without investing big marks in flexible production lines. That makes short runs of such products economical. In 1983, when Heinz Greiffenberger took over ABM Baumüller, an ailing $40 million maker of motors and gearboxes for cranes, he did away with standard products and focused on tailoring motors and gearboxes to customers' wishes. Revamping production, he installed $20 million in highly automated machines. "I can switch production to a different product within seconds," boasts Greiffenberger. That strategy worked. Within one year of a $6 million loss, he was in the black.

By steadily infusing manufacturing with high technology, Germany's little-known tigers are holding their own in surprising markets. Wilhelm Zuleeg, an $18 million textile company, has no problem fighting low-cost Asian textile giants as well as high-end Italian and French rivals. In the middle of the Bavarian countryside, computer-controlled looms whir, churning out high-fashion fabrics for some of the world's swankiest designers, including Cerruti, Anne Klein, and Georges Resch, with just 85 employees. "We have the most modern factory and no machine older than five years," says Stefan Zuleeg, who has built up exports from zero to 20% in three years.

In concert with hundreds of similar companies, Zuleeg has powered Germany to a surprise position as the world's No. 1 textile exporter, selling more than $11 billion worth a year—a third more than Hong Kong. Indeed, Far East rivals show respect for the Germans. "They have very strong technology," explains Masanori Yamamoto, an international-affairs official at the Small & Medium Enterprise Agency of Japan's International Trade & Industry Ministry. "In Japan, we tend to use German machines where making good, precision products is important."

All these successes increase the *Mittelstand*'s political weight at home, assuring plenty of government support. Small companies are eligible for up to $6 million in cheap funding from the government-owned Kreditanstalt für Wiederaufbau. And the government reserves a fat slice of research funds for *Mittelstand* companies. Those with annual sales of less than $590 million can get grants covering 40% of the costs of developing and implementing modern biotechnology-production methods. The growth in R&D outlays for companies with fewer than 1,000 employees is a stunning 21% a year. So it's no surprise that nearly two-thirds of German exports are technology-intensive.

Moreover, industry associations produce standard contracts translated into different languages and offer legal assistance in reading foreign contracts at no charge to members. They also a German companies to use their for offices when negotiating deals, espe ly in places where the infrastructu poor, such as Moscow.

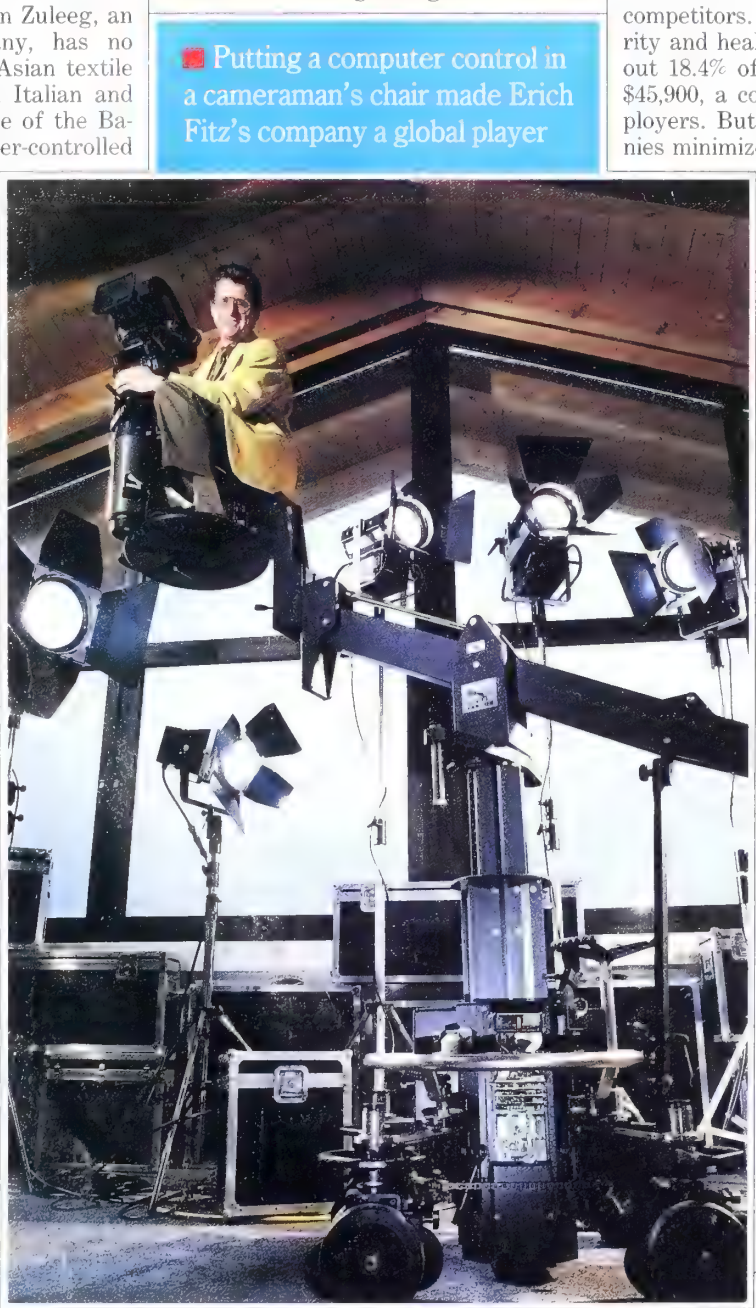
When a deal needs financing, co nies can turn to a banking system sitive to the needs of exporters ra than takeover artists. Deutsche B for example, offered Barth's Ma Potschak use of an office and secre while prospecting for business in I nesia, Nigeria, and Russia.

EXTRA MILE. But the vast majorit *Mittelstand* CEOs argue it is their efforts, not this infrastructure, make the difference between suc and failure. Consider the role of un *Mittelstand* companies seem to e better labor relations than most for competitors. Under a costly social s rity and health system, employees out 18.4% of their annual wages u $45,900, a contribution matched by ployers. But this helps German co nies minimize confrontations with la Only 30% of *Mittelst* companies are unio compared with the na al average of 70%.

The *Mittelstand* v force is highly trai thanks to apprentice programs. Training apprentice costs $18,0 year for two to years, roughly the s a year as an Ivy Lea education. Altho trainees are not requ to stay on after con tion, many remain life.

The lack of compar training programs in U. S. may account for problems Germans they encounter when ing to find suppliers American operations. instance, Hans Kn owner of a Munich-b electronics compon company, spent years scouring the for suppliers to his sidiary there. In the he sent Bavarian pu ing, bending, and dri machines to the U. S cility. "Americans d take the time and tro to make a really g product because t want an immediate turn," Knürr says. N he makes a profit sel components to custo

Putting a computer control in a cameraman's chair made Erich Fitz's company a global player



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such as NASA, Hughes Aircraft, and Texas Instruments.

The Germans are having to apply the same determination in eastern Germany. Not surprisingly, Bonn officials see rebuilding the *Mittelstand* there as the fastest way to turn around a collapsed socialist economy. The Treuhand privatization agency is helping former owners buy back companies that were nationalized and run into the ground. Already, management buyouts total 500 out of 3,000 companies sold in the past year. Employment in small and midsize companies is up to 20% of the work force, from almost nil. In the east, "the *Mittelstand* companies already are the most successful ones," says Treuhand head Birgit Breuel. She is now racing to chop the former state *Kombinate*, or conglomerates, into smaller, more petitive companies to be sold to old managers.

With the collapse of the Soviet pire and the need to transform cen planned economies to a market sy policymakers throughout Europe watching Breuel's efforts closely. *Mittelstand* were crucial in trans ing Germany's war-ruined econor

WHY JOHANN CAN EXPORT, BUT JOHNNY CAN'T

At a time when U. S. export growth is flagging, the problems that frustrated Ron Ekas speak volumes. So, too, do the proposed solutions.

As the new international marketing manager for tiny Benton Corp. in Warrendale, Pa., Ekas sought help in discovering how to export the company's navigational testing devices. He got a list of foreign distributors from the Pittsburgh office of the U. S. Commerce Dept. But his quest for working capital took him in a circuitous route from Duquesne University to the Small Business Administration, from the Pennsylvania Commerce Dept. to the Export-Import Bank, and back again. "I got right in the middle of a big loop," Ekas says. "Everyone sent me other places to look for assistance."

Benton, with only $4 million in sales, did eventually sell a $1 million missile simulator to Australia. But the presence of dozens of competing yet poorly staffed agencies in the U. S. export "infrastructure" is a major factor holding back thousands of smaller U. S. companies such as Benton. To lure more such companies into the export game, a growing number of experts argue, the thicket of federal, state, and local agencies must be made more rational.

TURF WARS. That's why Germany's *Mittelstand* system is a model. While the central governments of Japan and France take much responsibility for trade, Germany's export growth, similar to America's, is spurred by coalitions of local and state agencies backed up by chambers of commerce, industry associations, universities, and similar organizations. With Washington keeping the U. S. Commerce Dept. and Small Business Administration on short leashes, local export "movements" sprang up in the late 1980s in the dozen or so states that account for the bulk of America's manufactured exports.

A key difference from Germany, however, is that American exporters compete with one another for money while facing a morass of conflicting advice and buck-passing. Because the Germans started their export drive decades ago, they have had time to reduce the clutter. "They've eliminated the turf problems," says German-born Burkhart Holzner, director of the University of Pittsburgh's University Center for International Studies. "Here, it is still a problem."

Despite buck-passing by government officials, Benton made a $1 million sale

With Germany as a model, Pittsburgh's civic elders are trying to grease their export machinery. In December, 1990, more than 200 business, government, educational, and nonprofit organizations endorsed the Pittsburgh International Initiative, in large part to make the export support structure more user-friendly. "We're trying to sort out the competition," says John McCartney, who heads the local U. S. Commerce fice. Along with Holzner, he h sparkplug behind the initiative.

Nearly a year later, progress slow, but the end result could n difference. One accomplishment to pinpoint what role a World T ter can play. The World Trad Assn. puts up major buildings ent cities where providers of e vices, such as translators, can space.

But in U. S. cities such as Mi St. Paul, these trade cent

sparred with state and othe agencies for political and fina port. That's bad news for would-be exporters. So when County decided that it, too, trade center in Pittsburgh, with the other members of burgh International Initiative nate overlap.

Pittsburgh figures that thes exporters could be the key growth. The city already has s as Westinghouse Electric, US H. J. Heinz, and PPG Industries tier of Pittsburgh companies, Black Box Corp., a $100 mil distributor of computer gear, Safety Appliances Co., is clickir

950s. Now, the Germans see them model for rescuing eastern Germa- ad indeed much of Eastern Europe the economic wreckage of commu- . Given the reluctance of Western pean and U.S. governments to in massive amounts of foreign aid, may be no other option.

Gail E. Schares in Munich and John deman in Berlin, with Robert Neff in and William J. Holstein and Stanley in New York

xports. With $474 million in sales, es gas masks, chemical suits, and quipment, a prime example of an *Mittelstand* company. These ket companies have built their in- al strategies from scratch, and nsion is weighted toward faraway

eans smaller companies could be a ce in creating new jobs for Pitts- f course, a better export infra- won't help unless the companies ove their own business culture. of resistance is great: A survey by the U.S. Commerce Dept. it many smaller companies do not asic knowledge of world markets, nt to go on trade missions, and do to translate sales material into anguages—all basic requirements ssful exporters.

MEBACK. Others are learning the ons. The state of Oregon commis- study of how German *Mittelstand* s can be such successful exporters manufacturing equipment. The ey unit of the American Electron- is trying to imitate German indus- iations by providing its members ort help. And export-trading com- widely discredited in the early e making a quiet comeback. The st successful such company is the hority of New York & New Jer- ort unit, which says it has helped ompanies rack up $200 million in

t likely that the American *Mittel-* ll ever become as well organized as 's. "The pieces of it are there, but 't a consensus about it," says . Thayer, president of Portland- erseas Strategic Services, which is ig the Oregon study.

en modest progress could have an n faltering U.S. export growth. n the early days," says manage- sultant Tom Peters. "It's all part -term transition" to a more globe- economy. Now that the U.S. has ne full benefits of a cheap dollar, ner step of creating a more export- manufacturing sector is just be- Digging out of hard times may n it.

By William J. Holstein in Pittsburgh

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CEO SCHACHT SAYS ADVANCE
ENGINES WILL REGAIN GROUN
LOST TO DETROIT DIESEL

DOES CUMMINS HAVE THE OOMPH TO CLIMB THIS HILL?

The truck-engine maker faces slack demand—and a strong foe

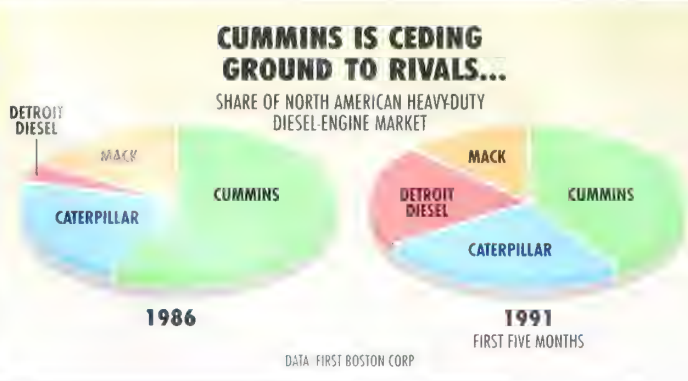
Henry B. Schacht won plenty of accolades in the mid-1980s for fending off a Japanese foray into the U. S. heavy-duty truck-engine market. When rivals such as Mitsubishi Corp. and Nissan Motor Co. threatened to win over U. S. customers, the Cummins Engine Co. CEO slashed prices by a resounding 30%. He then quickly embraced such Japanese techniques as just-in-time inventory management and flexible manufacturing systems. Although Cummins lost a truckload of cash—a total of $207 million in net losses from 1988 to 1990—Schacht kept the Japanese from denting the company's commanding 50% market share.

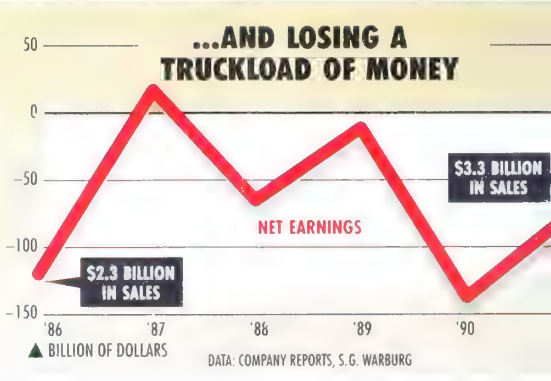
Unfortunately, while Schacht was patrolling the borders, all was not well behind the lines. An important new launch of Cummins engines was a disappointment, the company was late to develop key products, and Cummins' trucking-industry customers went into the tank along with the economy. Then, there was a decidedly un-Japanese competitor known as Detroit Diesel Corp. The once-sputtering engine maker, formerly a unit of General Motors Corp., was being turbocharged under the leadership of auto-racing great Roger S. Penske.

Detroit Diesel has been leaving Cummins in the dust for more than two years now, thanks to its ground-breaking Series 60 electronically cont diesel engine. Besides offering dr cally better fuel efficiency, it boas ty computerized features that dia mechanical problems and can m engine use—and thus track drive ductivity. Detroit Diesel's market has rocketed to roughly 22% this from 6.5% in 1989, while Cummins' has slid precipitously, to 40% in from 50.3% two years ago.

ON THE ROAD. Schacht is respond this latest jam with typical fervor. mins went into full production of it line of electronic heavy-duty dies gines in late 1990. And nowadays, find the patrician 57-year-old Scha Harvard MBA, out on the road pr the flesh with truckers, some Penske has done for years. One mins customer, U. S. Xpress Enter Chairman Max Fuller, says he had met Schacht until this year, despite year business relationship. Mean Cummins will soon announce a join ture with Soviet truckmaker Kam build engines.

Stateside, Schacht has cut ove





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with a vengeance. In late 1990, he slashed Cummins' work force by 14%, or 3,600 workers. Analysts predict the move could save up to $150 million through 1992. And he believes the company can reach the breakeven point on a quarterly basis by the end of this year.

Cummins is also downshifting to position itself in the growing, if less profitable, market for midrange diesels. These engines are typically used in recreational light trucks and smaller rigs for intracity transport. Taken together, Schacht figures these moves will eventually get Cummins up to speed. "We'll get customers back a deal at a time," he vows.

Schacht can certainly point to some progress. Despite lower heavy-duty engine sales industrywide, the company lost only $11.8 million in the third quarter, down from $55.8 million during the year-ago period. And Cummins' new electronic engines are garnering favorable reviews. U.S. Xpress Enterprises, for one, recently switched back to Cummins from Detroit Diesel engines. Says Chairman Fuller: "They've really made big improvements."

HOT TRIO. Even so, Cummins faces a steep climb back. Competition in the heavy-duty engine market is fiercer than ever. Detroit Diesel introduced its electronic engine four years ago and has since established a solid customer base. Caterpillar Inc., with 25% of the heavy-duty market, remains a tough rival with its high-powered electronic engines. "It's the first time the industry has had three very, very good engines," says James L. Hebe, executive vice-president of truck manufacturer Freightliner Corp.

And Schacht's bid for a comeback couldn't be more ill-timed. The economic slump, the nationwide credit crunch, and uncertainty over the impact of new federal air-quality standards have all chilled demand for truck orders. As a result, engine makers will build only 90,000 engines this year, down from 165,000 in 1988. And Prudential Securities Inc. analyst Steven J. Colbert believes a big rebound isn't in store until 1993.

Cummins' tattered finances don't leave Schacht well-positioned to ride out the slump. The company's long-term debt still remains at 44% of total capital—a hefty burden for a manufacturer in a cyclical business. But Cummins can't scrimp on research and capital spending, given the heightened competition among engine makers. Those expenditures will run more than $350 million this year. And Cummins' free cash flow—calculated as cash flow less capital expenditures—will run a negative $49 million this year, says S. G. Warburg & Co. analyst David G. Sutliff.

To conserve cash, Schacht cut Cummins' quarterly dividend to 5¢ a share in May, from 55¢. But if business doesn't rebound soon, analysts figure Cummins might need a cash infusion from equity investors. Schacht disagrees. He insists the $250 million in equity that Cummins raised last year from three major investors—Ford, Tenneco, and Kubota of Japan—should be sufficient. But investors are leery: Cummins' stock has lost 20% of its market value from its two-year high of 54 set in June, 1990.

AUTO-RACING GREAT PENSKE HAS TURBOCHARGED DETROIT DIESEL

As harsh as market conditions have been, Cummins has contributed to its predicament. Its image took a beating in 1988, when the company's new line of 10- and 14-liter heavy-duty engines proved to be riddled with bugs, including pistons that would crack. Customers fled to Detroit Diesel, which was waiting in the wings with its new engine.

Detroit Diesel's effusive chief made the most of the opportunity Cummins handed him. Penske, who bought a 60% stake in the company from GM in 1988 and now owns 80%, flew around the country to hawk the company's engine. He even offered to install it in customers' trucks on a trial basis. Detroit Diesel also set up a 24-hour toll-free phone service to assist owners of its Series 60 engines. Small wonder that one of the the nation's largest long-haul carriers, Schneider National Inc., shifted from Cummins to Detroit Diesel this year.

To be sure, Schacht had his share of distractions. Cummins spent much 1989 discouraging the unwelcome vances of Industrial Equity Pacific a Hong Kong-based investment co ny controlled by New Zealand inve Sir Ronald Brierley. In the end, Sch won by persuading Ford, Tenneco, Kubota to buy 27% of the company

TESTING, TESTING. And the link has worthwhile. Ford agreed to buy mins' midrange diesel engines for its dium-size trucks, as did Chrysler fo Dodge pickups back in 1989. Such g have led Cummins to predict that its drange business will gene operating margins of 20% 1993, up from breaking two years ago. Midrange-en production has explode about 124,000 units last y from 1,500 units in 1983, tha to the popularity of light senger trucks.

But Cummins' core busi is still its engines for big where gross margins run h er than the midsize var Schacht is counting on the line of electronic 14-liter gines to close the techno gap with Detroit Diesel. Ho to avoid a repeat of the em rassing rollout of a few y back, Schacht has put the engines through four time many road tests as prev models. He has also assig more engineers to the fac floor to safeguard quality.

Cummins is also takin page from Penske's customer-se manual. When complaints began a the poor hill-climbing ability of its liter engine, Cummins improved the gine's torque. And it has become responsive: Customers note that war ty claims are now paid within 15 d rather than 90 days.

Despite these gains, Schacht can h ly rest easy. Detroit Diesel is still ving up, and its 22% market share w probably be even higher if it had production capacity. Last year, the pany's one plant sold all of the 16 engines it cranked out. Detroit Di President Ludvik F. Koci says his pany will more than double annual pacity to 43,000 units by the end of 1 Says Koci: "We've made a commitm to continue our growth."

Cummins is confident that it will gain its 50% of the truck-engine ma in less than two years. Maybe so. it's now clear that while Cummins fighting off an invasion from abroa took its eye off an equally impo threat on the home front.

By Kevin Kelly in Columbus,

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STRATEGIES

TAKING AN AX TO ALLIED

Bossidy is cutting divisions and debt—but will it be enough?

During his 34-year tenure at General Electric Co., Lawrence A. Bossidy became a devotee of Chairman Jack F. Welch Jr.'s up-or-out philosophy of conglomerate management. Under Welch, a business unit that wasn't the No. 1 or No. 2 player in its market didn't have much life expectancy. So it should come as little surprise that Bossidy, who in late June left GE as vice-chairman to take over as chief executive of Allied-Signal Inc., has already started storming through the sprawling manufacturer of auto parts, aerospace components, and chemicals.

In early October, Bossidy announced a top-to-bottom restructuring that will eliminate 14%, or 5,000, of Allied's salaried workers, slash capital spending by 24%, and divest eight business units (table). But that's just the start. By next year, Bossidy plans to sell Allied's 39% position in Union Texas Petroleum—which could fetch $1 billion or so. And more asset shuffling seems certain: Bossidy will scrutinize all of Allied's 76 manufacturing units through 1993. "He's a very decisive man," warns Norman P. Blake Jr., chairman of USF&G Corp. and a former colleague of Bossidy's at GE.

Bossidy clearly intends to restore some needed discipline and bottom-line focus to Allied, whose return on equity was 13.7% last year, compared with an average of 15% for most conglomerates. The 56-year-old Bossidy is hell-bent on getting that up to 18% by 1994. Says the new chief: "We have to restore confidence that we can meet goals."

Hitting profit goals was never a strong suit of his predecessor, Edward L. Hennessy Jr. In a flurry of acquisitions over the past decade, Hennessy expanded Allied beyond its core chemical business into everything from spark plugs to aircraft engines. But while revenues rose from $3.2 billion to $12.3 billion from 1978 to 1990, profit margins averaged only 5%. Hennessy, 63, resigned this summer—18 months ahead of schedule—but will retain the chairman's title until January. Now, Bossidy is calling the shots. And he's likely to focus Allied's dwindling pool of capital expenditures only on proven earnings performers.

That's probably wise, because Allied doesn't have a lot of wriggle room right now. Thanks to last decade's spending splurge, Allied's debt is more than 40% of capitalization, and cash flow ha negative for two of the past three Worse, the economic downtur played havoc with all of Allied businesses—auto parts, aerospace ponents, and chemicals. Earnings off 13% last year, to $462 milli revenues of $12.3 billion. And the restructuring will likely produce of $355 million this year on flat s

LIGHTER BURDEN. If the company's in Union Texas does fetch $1 bill will go a long way toward cleani Allied's balance sheet. Bossidy pl use the proceeds to pay down which would pare that burden to a comfortable 27% of capital. His de to cut Allied's dividend nearly in from $1.80 to $1—will generate a savings of $350 million a year should help transform Allied's ne cash flow of $250 million this year positive stream by 1993.

Another challenge that Bossidy is finding new growth vehicles. has plenty of p ing products choose from, i ing a new com ized collision-a ance system airliners that i pects to contr about $500 milli revenues by 199

But can Bo fix, rather thar dump, more m Allied units? Bendix, a parts er that has bee by the hard tim the automotive try and hobbled legacy of unc vestment in r years. As the worldwide proc of antilock bra systems for car trucks, it could ground with enough attention. Yet wonder whether Bossidy can refa Bendix into a leader, given his pre need to keep a lid on costs. "The either step up and be a player noticeably weaker," says Tim Leu president and CEO of ITT Corp.'s au tive unit.

For now, investors are appla Bossidy's arrival. Since he took ov June, Allied's stock has jumped ro 33%, to around 40. Whether inve feel the same way a year from no depend on whether Bossidy's au pruning of Allied results in a sprin of growth.

By Bruce Hager in Morristown

BOSSIDY: "WE HAVE TO RESTORE CONFIDENCE THAT WE CAN MEET GOALS"

BOSSIDY'S MAKEOVER AT ALLIED-SIGNAL

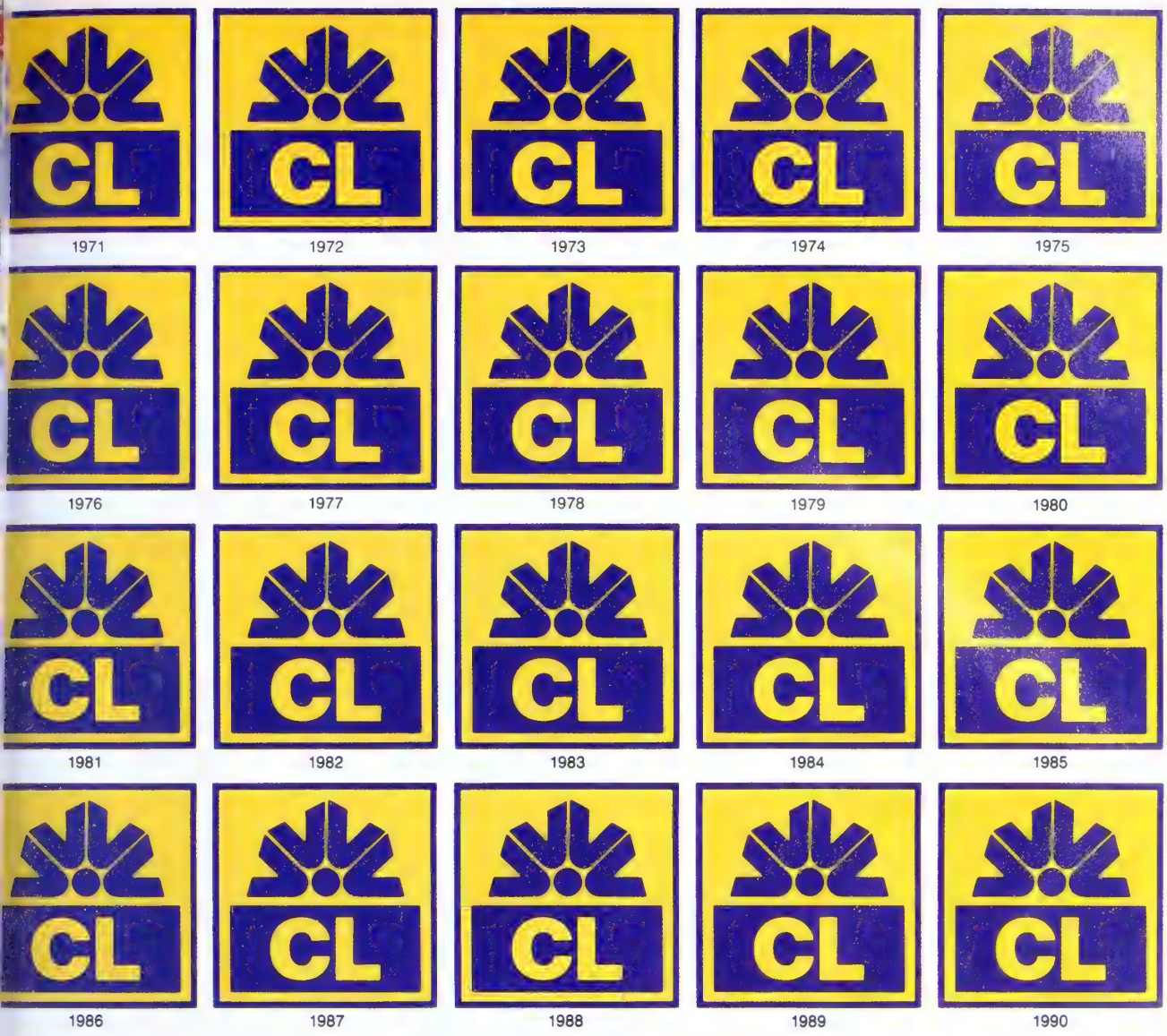
WORK FORCE
Salaried work force will be reduced by 14%, or 5,000 salaried employees

DIVESTITURES
Eight business units, mostly small auto-parts and aerospace operations, will be jettisoned

CAPITAL SPENDING
In 1992, capital spending will be slashed by $250 million, or 24%

DIVIDEND
Annual dividend will be reduced to $1 from $1.80

DATA: BW



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ENTREPRENEURS

PUTTING THE RED ZINGER BACK INTO CELESTIAL

The herbal tea maker wasn't the same without founder Mo Siegel

At Celestial Seasonings Inc., tampering with Almond Sunset is almost like resetting the crown jewels. This, after all, is the brew Nancy Reagan used to soothe a ruffled Raisa Gorbachev at the 1985 Geneva summit; Celestial employees have called it "summit tea" ever since. But that doesn't bother Morris J. "Mo" Siegel, Celestial's iconoclastic 41-year-old founder. Drawing a sip through his teeth and noisily slurping it in, he pronounces his verdict: "It's a little boring." Maybe blending in another flavor will help. "Did you look in a cookbook?" he asks his half-dozen assistants. "What does Betty Crocker put with almond?" They barely have time to answer before Siegel butts in. "Let's get radical," he says with a grin. "Vanilla, coconut, chocolate... Who says we can't use chocolate?"

Nobody says he can't—at least, not anymore. Siegel, the man who built a multimillion-dollar market for herbal teas with such concoctions as Red Zinger and Grandma's Tummy Mint, has just returned to Celestial Seasonings after a five-year hiatus. His plan had been typically lofty: Working with a variety of nonprofit organizations, he wanted to save the world. But he learned a lot about himself along the way. "I put a lot of my life into this company," says Siegel, who sold Celestial to Kraft Inc. for about $40 million in 1984. "I missed the corporate world."

At Celestial's Boulder (Colo.) headquarters, the sense of excitement is as pungent as the scent of lemon grass wafting through the building. Siegel, chairman and CEO, brings with him not only taste buds but a quirky blend of philosophy and business. He says he'll concentrate on marketing and product development—both, naturally, using such environmentally correct prescriptions as the omission of strings and tags from most tea bags.

The hope is that his presence will translate to greater sales, now around $51 million a year. After rising rapidly under Kraft, revenue growth has slackened since management bought out the company in 1988 for about $60 milli Siegel may be just what it needs. was Siegel's vision, his enforcement the cult that defined Celestial," s Tom Pirko, president of beverage c sultant Bevmark Inc. "Celestial nee the spirit Mo imbued."

As he reacquaints himself with Ce tial's operations, Siegel wants in on most every detail. So, on this su morning, he's off at a trot to the aro lab—actually a windowless confere room dubbed "the dungeon"—where sniffs the contents of little glass ja Today's fragrance is for a laundry pr uct under development by Earth W Inc., a company Siegel founded to p duce garbage bags from recycled pl tic, kitchen cleaner from vegetable and other products. Celestial agreed buy Earth Wise when Siegel returne

CORPORATE NARCS. "You've got to kidding," he says, wrinkling his n over one jar of scent. Another he p nounces "awesome," a third he c pares to clothes on a line: "It's sad, clothes drying in sun don't smell t good." Siegel says won't disclose what t product is, for comp tive reasons. In fact, may not even pursue Procter & Gamble has a similar prod with "the right envir mental solution." wishes the consum goods giant well. "could affect more p ple in a positive w than we," he says.

Such rhetoric may difficult for outsiders swallow, but there's denying that Celes has always embrac environmental concer The corporate-beli statement pledges lestial's actions to "building blocks in m ing this world a bet place now and for ture generation

And despite di cult years un Kraft, which o riled employees hiring an underco agent to investig suspected drug use Celestial, Siegel is ing his best to kee a hang lo kind of com ny. There's

MO SIEGEL: FROM CELESTIAL TO SAVING THE WORLD—AND BACK AGAIN

1969	Celestial Seasonings founded by Mo Siegel
1984	Kraft buys Celestial for $40 million. ***Revenues:*** *$27 million*
1986	He leaves to pursue various causes, creating Jesusonian Foundation and Earth Wise, among other things
1987	Unilever's Thomas J. Lipton says it will buy Celestial, but deal is foiled by antitrust challenge. ***Revenues:*** *$35 million*
1988	Management buys Celestial back. ***Revenues:*** *$45 million*
1991	Siegel returns as chairman and CEO. ***Revenues:*** *$51 million*

DATA: BW, BW ESTIMATES

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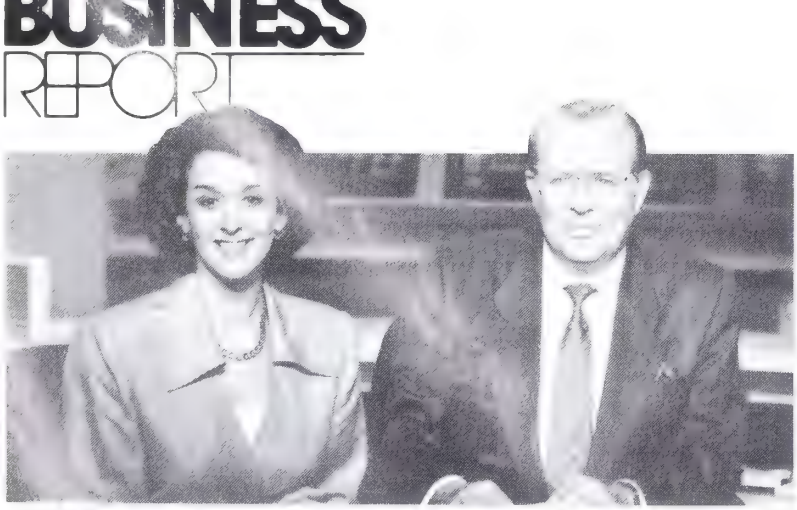

WEEKNIGHTS ON YOUR PUBLIC TELEVISION STATION.

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People

shower for employees who bike to
and a track for noontime runner
roller bladers. The corporate unifo
jeans and a T-shirt.

Curiously, Siegel has begun spor
tie since returning to Celestial. B
warm days, the tie accompanies s
moccasins, and ankle socks. And
won't find these ties in the E
Brothers catalog. Selected to proje
image of a wild and creative guy, e
stranger than the next. The most
geous is one Siegel calls "road kill,"
a design resembling crushed feath

HIPPIE DAYS. Like many of his g
tion, Siegel's odd style is informed
hippie years in the late 1960s.
growing up in a little Colorado
called Palmer Lake, the son of a ra
who also ran a store in nearby Co
Springs, Siegel attended college b
before setting off to Aspen to set
health-food shop. The tea business
into being around 1969, when Sieg
first wife, and another couple
picking herbs for tea. The women
sewed muslin bags to package the
the men sold them to health-food

Mother Teresa poked Siegel in the chest and said: 'Grow where you're planted'

around Colorado. The reception
overwhelming, and by 1972, Siegel
half-dozen investors had incorpo
The health craze of the '70s swept
tial along, winning it space on supe
ket shelves and ballooning revenu
$27 million, by the time Kraft arri

The buyout netted Siegel more
$10 million and gave him the chan
go off and better the world. He h
found Omega Technologies Inc.,
grows algae containing Omega
chemical that helps prevent hear
ease. He also started the Jesus
Foundation to further the teachin
Jesus. His father was Jewish, but S
says he developed that interest wh
tending Catholic high school. He hi
is not a member of any church. A
also worked with John Denver o
Windstar Foundation, an environm
group. And he started Earth Wise

Meanwhile, Kraft was busy bu
up Celestial. The corporate parent
vided marketing research, advert
and cash to pay for rapid growth
brand. Celestial's revenues incr
more than 50% under Kraft, to $4
lion. But Kraft apparently failed

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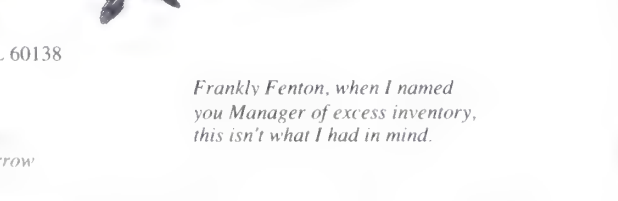

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People

derstand Celestial's niche in the h food market. It developed a Cel blend of seasonings to flavor beef, things, and ordered the company t its well-known sponsorships of p sional bicycling. Friction followed by 1987, Kraft tried to sell the com to Unilever's Thomas J. Lipton Co. tea maker R. C. Bigelow Inc. challe the purchase on antitrust grou Kraft sold Celestial back to ma ment, backed by Vestar Capital Co

A LITTLE HAZY. At the same time, S was growing frustrated with his l public service. He missed the com tiveness that's "so much fun" in th porate world. He began to ponde advice of Mother Teresa, whom he met on a trip to India in 1985. She poked him in the chest and said: "G where you're planted." This summe lestial President Barnet Feinblum Vestar managing partner James P ley offered Siegel a chance to ac 25% equity to come back.

Siegel says he has returned to h all aspects of the company, alth he's a little hazy on the numbers

> Chairman Siegel's goal 'Revenues of $96 millio by '96 . . . or maybe it's $76 million by '96'

goal, he says, "is revenues of $96 m by '96 . . . or maybe it's $76 millio '96." (The real number is closer to 9 says later.)

Now, Siegel's main task is to Celestial growing while protecting things that make it special. When a to the packaging department rem him that some Celestial tea bags now encased in foil—not the ultima environmental friendliness—S balks. Customers "might expect it Bigelow, but they don't want it Celestial Seasonings," he tells a ma er. Changes are discussed.

Ever the radical, Siegel says he even overthrow Celestial's sacred gan. Over a lunch of barbecued chi and Iced Delight tea in the company eteria, Feinblum asks "Don't you 'Soothing Teas for a Nervous Wor Siegel squints into the bright aut sun and says he dislikes the word vous. Besides, the tagline would be "if we just want to sell herb tea fo rest of our lives." But he's got bi plans. Mother Teresa poking you in chest will do that to you.

By Sandra D. Atchison in Boulder,

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WORKPLACE

LOTUS OPENS A DOOR FOR GAY PARTNERS

It's the first big company to give benefits to gay workers' 'spouses'

Four years ago, software engineer Margie Bleichman asked her employer, Lotus Development Corp., to provide health insurance for her longtime companion—another woman. Its answer was "a polite rejection." Others asked the same question. Same answer. "None of us was surprised," admits Polly Laurelchild, a senior communications assistant. "You don't expect to walk into a company and get this" benefit.

They do now. In September, the Cambridge (Mass.) software maker quietly told homosexual employees it would offer their partners the same insurance and other benefits accorded heterosexual spouses. "This is fair and equal," says Russell J. Campanello, vice-president for human resources.

RAW NERVE. Gay and lesbian leaders hailed the action, the first of its kind by a major public company, as a milestone. "I've gotten so many calls on this, you wouldn't believe it," says Mary Bonauto, an attorney with GLAD, a Boston group that represents homosexual plaintiffs. And, Lotus managers say, 80 other companies have called asking for details.

Clearly, Lotus' new policy has touched a nerve. The issue of discrimination against homosexual workers has become an acrimonious one, as gay groups target the workplace as a setting ripe for change. In the past year alone, a dismissed Shell Oil Co. executive won $5.3 million after a court ruled he had been terminated illegally for being gay. (Shell, which claims he was fired for other reasons, is appealing.) Gay-rights groups, together with the city of New York, have publicly battled the Cracker Barrel Old Country Store Inc. chain for firing gay restaurant workers. And the city of San Francisco forced General Motors Corp. to withdraw an internal marketing video in which a customer described Japa pickups as "little faggot trucks."

But while fighting dismissals and paigning for a tolerant workplace main key concerns, many gays have lated a more tangible demand: insur coverage and other corporate ben for partners (table). These aren't p most human resource managers grant easily. Before Lotus, only a d private employers had done so, m nonprofit institutions.

Some companies fear violating a tedly arcane laws prohibiting hom ual acts. But for others, the issu simple economics, as corporations gressively seek to stem rising h care expenses. "The last thing an ployer wants now is to add an group of dependents," says Mari Dufresne, a senior vice-president at adelphia consultant Hay/Huggins C

But the liability may not be that l if Lotus' experience is any indicatio far, only 12 of an mated 310 gay em ees (10% of the 3 person domestic force) have applied partner benefits. course, the policy is very new, but the mand mirrors the e rience of the few ployers that similar benefits. W the city of Seattle tuted health cove for homo- and he sexual partners in it budgeted $430,00 suming 300 wor would sign up; to fewer than 200 costing the $225,000. Some wor still opt not to ide themselves as gay, confidentially; ot have partners who insured elsewhere.

Not that Lotus' sion came easily 1989, Bleichman, elchild, and co-wo AnnD Canavan b petitioning Lotus spousal benefits. after Lotus agree took the company the three emplo two years to devel workable policy. Th surance carrier pays Lotus' cl above $140,000 wa luctant to take on

'FAIR AND EQUAL': LAURELCHILD, BLEICHMAN, AND CANAVAN HELPED SHAPE LOTUS' POLICY

ACTIVIST GAYS SEEK SPOUSAL BENEFITS

AT&T A lesbian is suing for pension benefits she says are owed upon the death of her partner, a former AT&T manager. Company argues payment is only available to widows or widowers

USAIR A Boston-based flight attendant has filed a union grievance, demanding free-travel perks for his partner. Company says only legally married spouses are eligible

LOTUS Three employees seek health coverage for gay partners. After two years, company forms policy

UNIVERSITY OF SOUTHERN MAINE An arbitration hearing dismissed a nursing school professor's claim for health insurance for her lesbian partner. USM had refused coverage, despite policy that forbids discrimination based on sexual orientation

DATA BW

(Ring, Ring) What time is it there? OK, I'm in Denver, that's Mountain time, so it's after five. I wonder if Jan's in. (Ring, Ring) I wonder if Wright called. Oh-my-gosh and Richard Terry. (Ring, Ring) C'mon, c'mon. I wonder if marketing got to the West proposal. I need to know if the Brown thing's a go because then the Callen thing's a no-go. And if that changes then my trip to Richmond changes, (Ring, Ring) I wonder why janitors can't pick up phones.

OR USI

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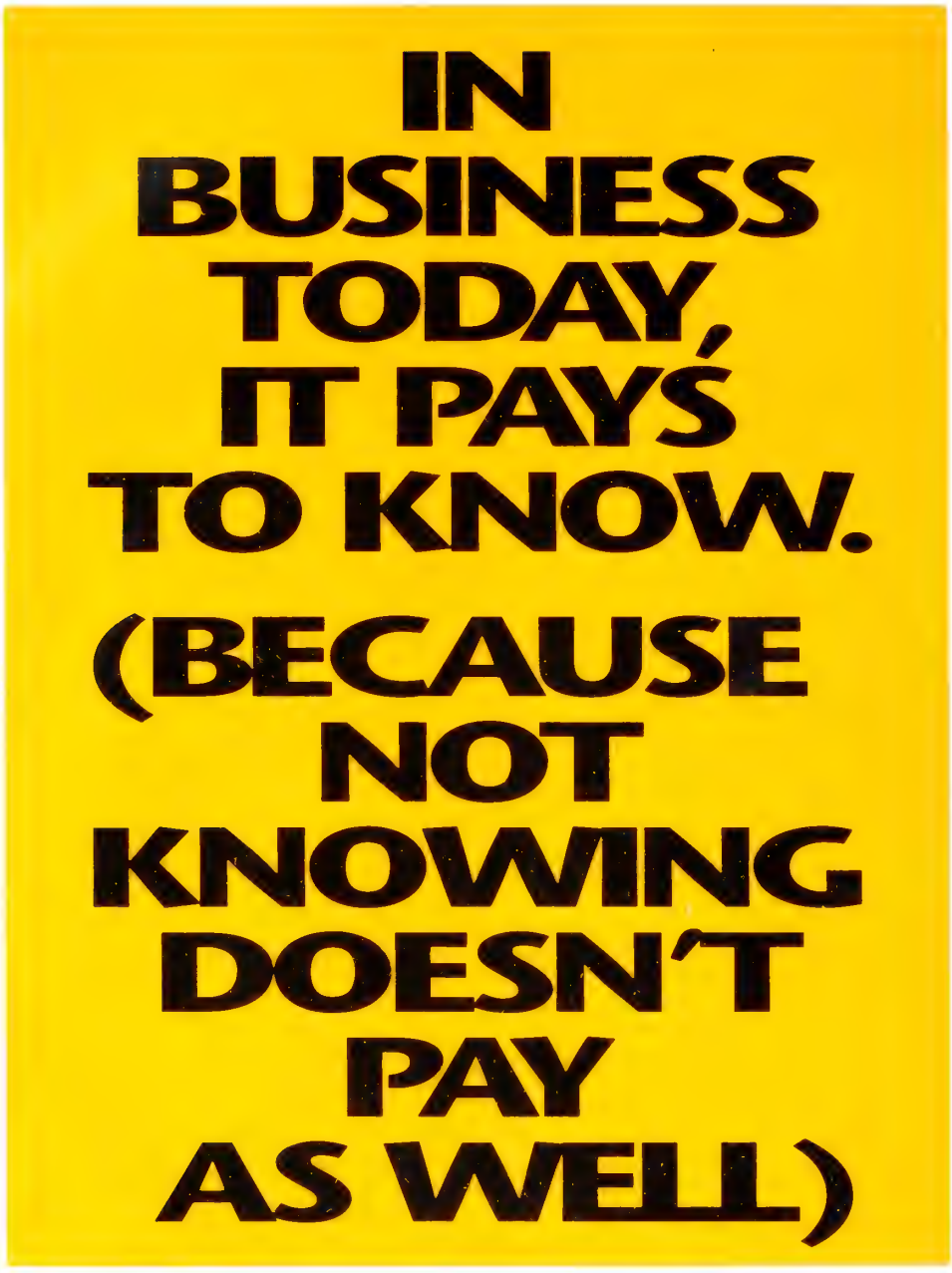

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xual enrollees—largely for fear of nous AIDS bills. Lotus convinced the er that the cost of caring for AIDS ns was "not a seven-digit dollar is- but about the same as treating a iary, says Campanello.

e company is spending about 00 in annual premiums to insure the pousal equivalents"—none of it tax- ctible, since the Internal Revenue ice doesn't recognize unmarried ers. Lotus had to create a separate ance plan for the couples; partici- g employees pay about $1,350 in a year on the premium's benefit.

ATE ISSUE. To be eligible, a couple live together and share financial ations. If they break up, the em- e must wait one year before regis- g a new partner. Besides health age, the policy's benefits include nsurance (the employee pays the ium), relocation expenses, bereave- leave, and a death benefit. Lotus not to offer the same benefits to rried partners of heterosexual em- es, as do a few employers such as & Jerry's Homemade Inc. and *The ge Voice*. Its reasoning: Straight es have the option of marriage, homosexual colleagues don't.

Lotus' announcement has thrown into the public arena what was, until recently, a private issue. Gay-rights advocates estimate that only one homosexual employee in 10 reveals his or her sexual preference in the workplace. Even at progressive employers, "most people don't want to come out," says Bennet Marks, a software engineer and founder of Apple Lambda, a gay employee group

> So far, many employers granting benefits to gay workers' companions find the costs lower than expected

at Apple Computer Inc. Most companies do not provide gay and lesbian employee groups with any support or financial assistance. Levi Strauss and Apple are among the few that specifically ban discrimination against gays; just 20% of companies with strong equal-opportunity policies explicitly cite sexual preference. Even Corning Inc., an award-winning leader in training employees to recognize racial and gender diversity, admits it hasn't made any effort to address homosexual workers.

But many companies are considering gay benefits in the context of a larger concern: A rising percentage of workers—unmarried couples, divorced people, single parents—doesn't fit into conventional benefits packages. At Digital Equipment Corp., "we're looking at the issue of redefining the family," says Susan Aaronson, U.S. manager of diversity. Skirting the issue of homosexual rights is also a safer course, since public prejudice against gays remains highly vocal. Religious fundamentalist groups criticized Digital when it included sexual preference in its 1987 antidiscrimination statement. American Telephone & Telegraph Co. says it got thousands of critical letters after sponsoring an internal "Gay Awareness Week" last June.

Lotus, however, has suffered little backlash. Of 300 letters received about its new benefits policy, it says, 80% have been positive. Some writers have even promised to buy more Lotus software. That's the sort of social change a company can easily accept.

By Keith H. Hammonds in Cambridge, Mass.

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TARGETING

THIS BUD'S FOR YOU. NO, NOT YOU—HER

From sneakers to guns, ads are taking women seriously

There's no more masculine product than a Smith & Wesson revolver, right? Think again. After Smith & Wesson Corp. launched LadySmith, a line of guns specifically for women, in 1989, the Springfield (Mass.) gunmaker saw its sales to women jump from 5% of the company's total to nearly 18%.

Like Smith & Wesson, a growing number of traditionally male-oriented marketers are learning that women make surprisingly avid consumers of products once assumed to be boy toys. From hardware chains to carmakers to brewers to insurers, companies that once ignored women now recognize that they may be the key to raising market share. Toyota Motor Corp., for example, sold almost 60% of its cars to women during the first half of this year, up from 45% during the first half of 1986, and it expects that number to grow again next year. "Women have become extremely knowledgeable about the car business," says corporate marketing manager Ren Rooney. "They have some influence on 80% of our purchases."

For decades, many marketers treated women as housewives with little interest in items beyond packaged goods, clothes, and cosmetics. Now, 57% of women aged 16 and over work full time, say New York researchers Find/SVP. Some 26 million women head their own households, and while women's pay still lags behind men's, their median income is growing faster.

'REAL CHANGE.' The insurance industry, for one, has taken eager note of women's growing financial responsibilities. "What we're seeing is real change in the whole makeup of the middle class's income and protection needs," says Don Bittner, advertising director at State Farm Insurance Cos. "It now takes two incomes for a family to exist." State Farm is marketing life insurance specifically to women through ads in magazines such as *Working Mother* and *Working Woman*.

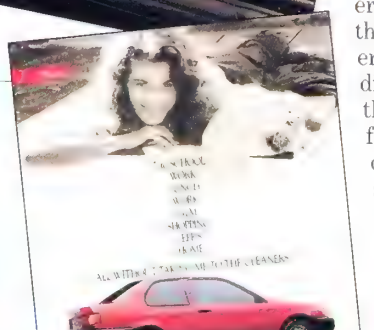
But if the changing role of many women has made them an attractive marketing target, it has also made them a tricky one. Simply rejiggering a male-oriented marketing approach may not work. Two years ago, for example, when Nike Inc. decided to boost its women's business, it "tried to mimic what we had done with men," says Kate Bednarski, manager for Nike's women's division. "We hired triathlete Joanne Ernst and tried to make a hero of her." In one spot, Ernst, explaining how to be fit, said "it wouldn't hurt to stop eating like a pig." The campaign "was a flop," Bednarski admits. "Customers said: 'You make great men's stuff, but I don't feel you understand me.'"

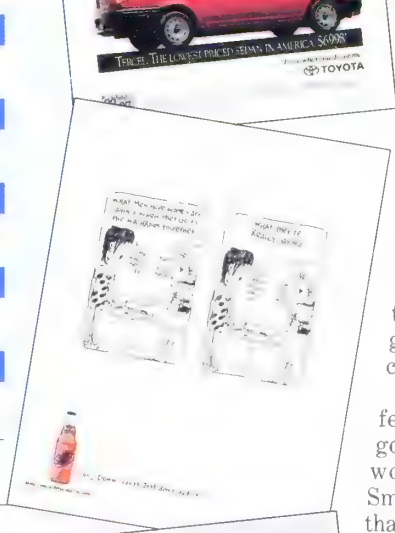
WOMEN OWN BIG-TICKET ITEMS

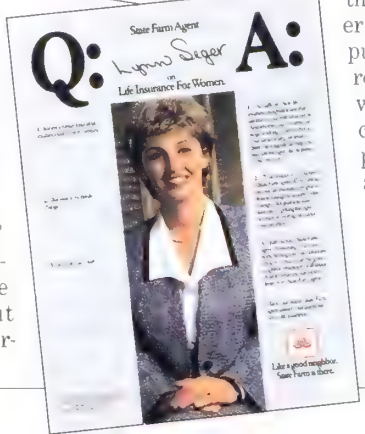
Percentage owned by women in 1990

WASHING MACHINES	56.0%
REFRIGERATORS	55.0
LIVING ROOM FURNITURE	53.9
MICROWAVES	51.6
NEW IMPORTED CARS	50.4
NEW DOMESTIC CARS	48.1

DATA: MEDIAMARK RESEARCH INC







So Bednarski and ad agency Wie Kennedy Inc. created a $12 million campaign calculated to show w that Nike understood them. Mult ads in such magazines as *Elle* and *bella* catalog women's fear aggravations. The stress building esteem with cise—in Nike course. Bedn says 20% of Nik billion business comes from wo up from 13% in 1

DIRECT TALK. Avis also decided to sta geting women af noted that the numb women business t ers was growing than the market in eral. The company discounts to membe the National Assoc for Female Execu created a camp showing a woma car, and placed th in women's maga such as *Lear's*, *E preneurial Wo* and *New Wo* The tagline: make the road a less lonely." Say len Kurzman, vice-president marketing serv "We wanted to directly to wome say: 'We under what is driving But we did not to say: 'We will give you pastel-co cars.'"

Indeed, superfi feminizing a produc good way to ensure women will avoi Smith & Wesson le that lesson early on. er manufacturers pu purple grips and eng roses on the sideplat women's guns," say chael Shypula, the pany's former direct advertising. "But found through groups that if a w is going to pull gun for personal tection, she do want a cute gun."

The company d

How nuclear energy benefits a typical family of four.

very year, the ospreys return to their life preserve around the nuclear elec- plant near Waterford, Connecticut, re nesting platforms have been built hem by the local utility.
's one more example of how peace- nuclear energy coexists with the environment. Because America's 111 operating nuclear plants don't burn anything to generate electricity, they don't pollute the air. They don't produce any greenhouse gases, either.

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If you'd like more information, write to the U.S. Council for Energy Awareness, P.O. Box 66080, Dept. OS26, Washington, D.C. 20035.

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HYUNDAI

ELECTRONICS AMERICA

design the guns to fit women's hands. And it made two concessions to aesthetics: The stainless-steel finish on the $366 LadySmith revolver is frosted, and the edges of the revolver and the $585 LadySmith pistol were rounded after women complained that the guns' sharp edges ripped purse linings.

Companies that face the most difficult challenge in marketing to women are those that have spent years alienating them. Many traditional beer ads have offended women with scenes of beer-guzzling men ogling bikini-clad beach bunnies. In May, Anheuser-Busch Cos. began trying to redress that with a new TV spot for Bud Dry. The ads, shot from the point of view of an unseen woman, depict dates with five men out of the annals of dating nightmares—including a nerd who raves about his mother's brisket and an unctuous yuppie with a cellular phone. "We certainly haven't offended women intentionally," says Steve Burrows, Anheuser's vice-president of beer brand management. "We have listened, and where change was appropriate, we were willing to change."

LONG MEMORIES. Some women say the change won't make them pick up a Bud. Rebecca Ann Brody, 27, an office manager at Performance Systems Group in New York, says Bud's new approach doesn't erase her memory of the old ads: "Good-old-boy beer ads really make me not want to drink the stuff. I drink beer that's not advertised."

In the antediluvian macho past, those Bud-guzzling guys often hung out at the local hardware store. But some major players in this once exclusively male preserve have noticed the rising proportion of women homeowners. Now, they're beckoning women such as Maggie Hartley, a 37-year-old scientist and avid do-it-yourselfer. Hartley made roughly 100 trips to the local Home Depot Inc. outlet during a five-year, $50,000 renovation of her Atlanta home. Other hardware stores made Hartley feel uncomfortable, she says. But at Home Depot, "I didn't have the feeling that people were asking: 'What is that woman doing here?' "

> 'People have called Builders Square a man's toy store. We don't think we're there yet for women, but we'd love to be'

To convey the message that hardware stores aren't just for guys wearing overalls and toolbelts, both Home Depot and Builders Square, the San Antonio-based do-it-yourself division of Kmart Corp., offer free weekly clinics in such tasks as laying ceramic tile and installing doors on bathtubs. The two chai the clinics attract large numb women. And Builders Square is b 4,000-square-foot "decor centers' new stores to be filled with ware as designer faucets and elabo carved door frames. "People ha ways called us a man's toy store Mark James, vice-president for r ing, who says 45% of Builders S customers are female. "We don' we're there yet for women, bu love to be."

SURPRISE. And there's no more arena than sports, right? Wro Everfresh Inc., a subsidiary of Jo batt Ltd., knows. The company test-marketing Cool Down, a pos out drink for women who don't l torade. "The great surprise is th American jock is not a male, it' male," says Andrew J. Brennar president of marketing and sa Everfresh. "She's the one who's e ing twice a week." The ads inco scenes from syndicated cartoonist Hollander's offbeat feminist strips. The characters contrast t ferent views women and men h dating, health, and sex, concludi "Guys just don't get it." Maybe n a growing number of marketers

By Laura Zinn in New Yo
bureau reports

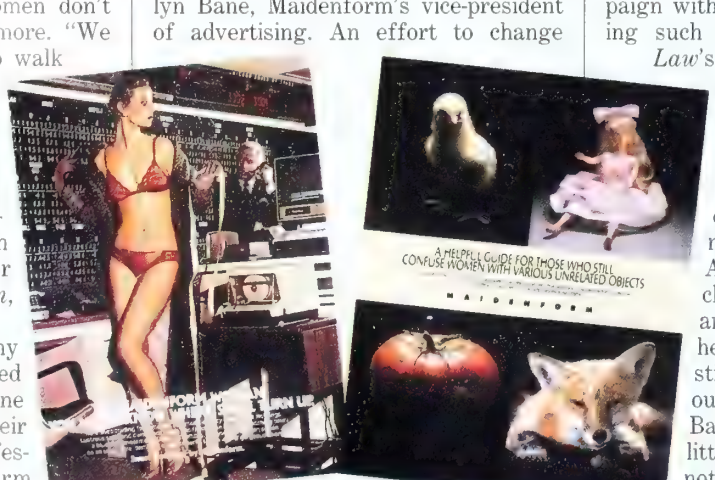
IN LINGERIE CAMPAIGNS, LESS WINK AND NUDGE

Remember the old Hanes hosiery ads? As a comely model turned male heads while sashaying across a crowded room, a chanteuse crooned: "Gentlemen prefer Hanes." Whether or not gentlemen still do, Hanes has decided that women don't prefer that sort of ad anymore. "We decided we really needed to walk away from the whole thing," says Lyn Salzberg, a senior vice-president at Hanes's ad agency, Saatchi & Saatchi Worldwide. Now, Hanes uses photos of accomplished real-life women, such as Diane English, the creator of TV show *Murphy Brown*, in a suit with a short skirt.

'BIZARRE.' Like Hanes, many fashion companies that honed marketing to women to a fine art have had to revamp their strategies to appeal to professional women. Maidenform Inc., for example, spent decades running its famous campaign, "The Maidenform Woman. You never know where she'll turn up," which depicted scantily dressed women in various public places. "The Maidenform woman ended up at the opera in her bra—mostly bizarre situations," says Marilyn Bane, Maidenform's vice-president of advertising. An effort to change with the times backfired in the '80s, when the underdressed w was a stockbroker or a doctor. says women wondered: "Why is tor there in her bra and panties?

So Maidenform replaced the paign with black-and-white ads f ing such male heartthrobs as *Law*'s Corbin Bernsen and *S man* Christopher R who explained why liked women in lin But that, too, had overtones. This year, denform decided to t more politically correct A new print ad shows a chick, a Barbie doll, a and a tomato. The tagli helpful guide for those still confuse women with ous unrelated objects." Bane: "We feel we've ta little bit higher road. T not an ultrafeminist state This is just a reminder."

By Laura Zinn in New



MAIDENFORM THEN AND NOW: AFTER A COUPLE OF DETOURS, "A HIGHER ROAD"

To the birds, it matters very little that these boxes of recycled paper reflect a child's creativity and involvement.

But to the environmental education program that distributes these take-home nests, and Phillips Petroleum, who sponsors them, it matters a great deal.

Because as life unfolds inside these cardboard walls, so too does an enduring understanding and respect for the wonder of it all. Helping students realize a greater awareness and responsibility for the environment.

And confirming our belief that when you teach a child about nature, he learns facts about nature.

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For more information about the Bird Box Program and what we are doing to protect our environment, write: Bird Box, Phillips Petroleum Company, 16C4 Phillips Building, Bartlesville, Oklahoma 74004.

INTRODUCING THE RE-DESIGNED, RE-CALIBRATED, RE-ENGINEERED, RE-INVENTED BMW 3-SERIES.

In today's volatile economy, even people of means are asking a question that should alarm the world's automobile makers:

"Just what makes this car worth the money?"

The new BMW 325i sedan, however, welcomes such scrutiny. Because not only does it embody the traditional BMW passion for driving, it offers a whole set of more practical-minded virtues–most notably safety, durability and ease of maintenance.

It represents eight years of intensive thought from every automotive discipline. An effort unlike any in BMW's history.

THE NEXT BEST THING TO A CAR THAT MAINTAINS ITSELF.

At the heart of the 325i is a new 189-hp, 24-valve engine so advanced that it requires little regular maintenance beyond the changing of oil, filters and plugs.

Its sophisticated electronics incorporate a "black box" sy that can play back past er events for the BMW techr revealing problems that m otherwise be difficult to de Or even describe.

THE 325i IMPACT-ACTIV SAFETY SYSTEM.

BMW has always helc the greatest safety feature car that enhances the driv ability to avoid accidents i first place. Thus, BMW's his excellence in the areas of s pension, steering and adva antilock brake technology.

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stem of "crush tubes" absorbs
more. The seat belts tighten
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A SAFE CAR NEEDN'T BE A BORING ONE.

The unique driving charac-
of the original 3-Series is not only alive in the new 325i sedan, but substantially enhanced.

The rear suspension is so unlike other cars in its class, it's patented. Resulting in improved stability in hard cornering, and a better grip of the road overall.

When it comes to comfort, the 325i is now longer, taller and wider than before. It has firmly supported seats. Left and right temperature controls, to allow for individual preferences. Even a microfiltration system that removes dust, pollen and most odors from the interior air.

Of course, the 325i is also equipped with BMW's four-year/50,000-mile bumper-to-bumper warranty,* for protection against unexpected expenses, as well as a Roadside Assistance program you can call upon any day of the year, on any road in the U.S.A.**

If you would like to receive literature on the new 3-Series, or be connected directly to your nearest BMW dealer, you need only call 800-334-4BMW.

We also invite you to stop in for a test drive, so you can find out what makes the 325i sedan worth the money from the best vantage point of all: the driver's seat.

THE ULTIMATE DRIVING MACHINE.

*our BMW dealer for details on this limited warranty ** Services provided by Cross Country Motor Club, Inc., Boston, MA 02155 except in CA, where services are provided by Cross Country Motor Club of Calif., Inc., Boston, MA

RISING STAR ROALD SAGDEEV, A SOVIET CITIZEN WORKING IN THE U. S., SAYS: "SOVIET SCIENCE IS A KIND OF ENDANGERED SPECIES."

'THE SOVIET BRAIN DRAIN IS THE U.S. BRAIN GAIN'

From physicists to biologists to engineers, thousands of the best and brightest head for America

At age 36, physicist Roald Z. Sagdeev became the youngest person to be named a full member of the Soviet Academy of Sciences, a top scientific accolade. Five years later, he became head of the prestigious Institute of Space Research in Moscow. There, he launched planetary missions and managed a staff of 4,000 of the country's rising scientific stars.

In 1990, as the superpowers mended fences, he married Susan E. Eisenhower, granddaughter of the former U. S. President. "For me," he jokes, "it was not just the end of the cold war, it was the beginning of global warming." Now, the 58-year-old Sagdeev is using his brainpower in the U. S. Although he remains a Soviet citizen with strong links to his former institute, Sagdeev has a permanent position as a distinguished professor of physics at the University of Maryland, where he conducts research in chaos theory. "Soviet science," he laments, "is a kind of endangered species."

As the Soviet economy disintegrates, many of the country's best and brightest are heading for the U. S., Israel, and other countries in what could amount to the largest brain drain since World War II. The Soviets predict that a half-million people, many of them Jews, will emigrate each year. On Oct. 7, Mikhail Gorbachev acknowledged the loss of "so many talented, skilled, and enterprising citizens." And when a free-emigration law takes effect in 1993, the number easily could rise. viets joke that this is not an em tion, this is an evacuation," says drei Kortunov, head of the for policy department of Moscow's I tute of USA & Canada Studies.

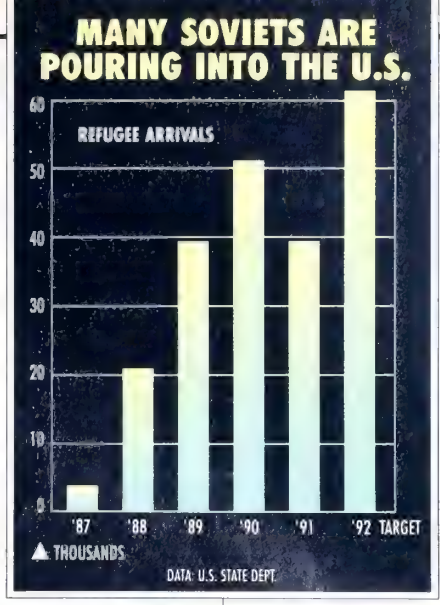
PLUGGING GAPS. But the talent po no longer limited to Jewish émig As the Soviets ease travel restrict hundreds of top-flight Russian spe ists, who remain Soviet citizens, coming to the U. S. on long- and sh term fellowships and work contrac fill jobs everywhere from Cambri Mass., to Silicon Valley. While visiting scholars return home a their contracts are up, many try best to stay by hopping from one to the next.

ready, Soviets experts are helping arge physics and mathematics de- nents at colleges across the coun- Israil M. Gelfand, one of the d's top mathematicians, for exam- s now at Rutgers University, help- o broaden the field of mathemat- y finding new ways to link it to disciplines. And virtually the en- faculty at the University of Minne- s Theoretical Physics Institute is the Soviet Union.

y research centers such as the onal Institutes of Health are tap- Soviet talent. During a three- h stay at NIH, which has long ht foreign scientists, Oleg Svirdov ed develop new techniques for suring thyroid hormones in the l. At Stanford, a Soviet biologist ed solve a Florida AIDS mystery. Pacific Bell plans to bring five et scientists to the U. S. next year wo-year contracts to work on new ems and software, says Director trategic Information Systems H. Firdman, who emigrated in 1981.

ECTED. Some émigrés have ched high-tech enterprises of their (page 100). Many are flocking to computer software industry. The et creator of Tetris, the addictive game, is on a three-year contract Bullet-Proof Software in Red- d, Wash. "The Sovi- brain drain is the brain gain," says hen Rosen, who a program at kmen's Circle in York to get Soviet tists into the U. S. ketplace.

be sure, only a tion of the émigrés landing in key posi- s. The winners are most prominent the- ical physicists, ad- ed biologists, math- ticians, and chem- It is much harder Soviets who have er scientific creden- or who have ad- ed degrees in such ls as higher educa- , medicine, and eco- ics. "In most cases, only the really ex- ite brains that are g sought after," Barney O'Meara, utive vice-president Kiser Research Inc., mpany that tries to rest U. S. companies oviet innovations. As the rest, laments ns Hopkins Universi- ty physicist and Soviet émigré Alexander E. Kaplan, "they become programmers, accountants, or cabbies—and potentially highly productive researchers are lost to science or industry, usually forever."



One reason is that U. S. universities are already brimming with talent, in part because of brain drains in recent years from such countries as China, India, and Britain. Although the Soviets are now flowing in, they face stiff competition at a time when U. S. universities are fiscally strapped.

But the inevitable difficulty of finding a job in the U. S. is not likely to prevent more Soviets from leaving home. For decades, the communists funneled money from state coffers into scientific institutes to produce such "socialist" feats as Sputnik and manned space stations. Now, Soviet leaders are simply grappling with how to feed the population this winter. With funds growing scarce for anything but the basics, the country's top scientific talent is feeling the budgetary pain acutely. "For science, there is no money, no jobs, no respect from the public," says Sagdeev.

As hard-currency reserves dwindle, it often takes Soviet scientists years to get an essential piece of imported equipment. And they can forget about Western scientific journals. "I spent my time to get food, clothes, and other necessities," says 45-year-old Daniil Usikov, head of computer software at the Institute of Space Research and now a visiting professor at the University of Maryland. "My productivity in America is 10 times more than in the Soviet Union."

His salary is 100 times greater. As chief of a department back home, Usikov received a monthly wage of 600 rubles. Although he received some socialist-style benefits, his pay was still a mere $20 at the tourist exchange rate. In the U. S., he gets $2,000 a month. If he can save one month's income, that translates into eight years' salary back home. "Every university in the country has had an upsurge in the number of Soviet scientists writing to ask for positions," says Steven E. Koonin, a California Institute of Technology physicist. "They are clamoring to come to the U. S."

A HANDFUL. Just how big an impact the Soviet experts will have is still a source of debate. It's unlikely the Soviets will ever pour into the U. S. in huge numbers, especially because the State Dept. puts a yearly limit—that now averages 50,000—on the number of Soviet refugees it will accept. But because even a relative handful of first-class minds can

GAME BOY ALEXEY PAJITNOV'S TETRIS VIDEO GAME HAS SOLD MILLIONS OF COPIES. HE DEVELOPED A POPULAR SEQUEL, AND OTHERS ARE IN THE WORKS

PHOTOGRAPH BY MATTHEW MOVAY SABA; ILLUSTRATION BY LAUREL DAUNIS, BW

have a major impact in science and technology, their contribution could be disproportionate to their numbers over the course of the coming decade.

Take biologist Eugene G. Shpaer. In 1988, he and his family arrived in the U. S. as refugees. Now, as a post-doctoral fellow at Stanford University, Shpaer used his expertise in computer applications of molecular biology to help verify that a Florida dentist had infected five of his patients with AIDS. "By the nature of his training and interests, he has added a new dimension to our research," says James I. Mullins, chairman of Stanford's department of microbiology and immunology.

Although Shpaer is trying to make a name for himself here, others brought big names with them. Aside from Sagdeev, there's 78-year-old Gelfand, who has garnered many math awards. Like Sagdeev, he's a full member of the Academy of Sciences, and he maintains strong ties to his home base at Moscow State University. After he spent a year at Harvard University and Massachusetts Institute of Technology, Rutgers offered him a five-year contract.

Gelfand sees many pitfalls in the U. S. educational system, with its emphasis on narrow specialties. "Everything is disjointed, separated," he says. "My aim is to attach." Already, he has helped create a new lab that combines his interests in math and cell biology. He laments that there aren't enough young Americans becoming mathematicians—and he's busy singling out Rutgers' most-promising to cultivate as his protégés. He's also starting a math correspondence school for high schoolers.

WINNING MIX. At the University of Minnesota's Theoretical Physics Institute, Director Larry McLerran began recruiting top Soviet scientists two years ago to what's jokingly called "Moscow on the Mississippi." Now, five of its six full-time professors are Soviets. It's not just the faculty who have been drawn to Minnesota. "For the past 10 years, there have been a large number of Chinese graduate students, but this year we'll have more Soviets," says Marvin L. Marshak, the physics and astronomy chairman.

Now that they're free to travel, Soviet scientists are very eager to collaborate with their U. S. counterparts. At MIT's lab for nuclear science, for example, many Soviet researchers from the Serpukhov Laboratory in Moscow are helping develop a radiation-hardened particle detector for the Energy Dept.'s Superconducting Supercollider project. The Soviets brought with them a winning mix: a supply of very expensive liquid xenon and their expertise. This state-of-the-art program "would not have happened without the Russians involved," says Arthur K. Kerman, head of the MIT lab. In all, 73 of the 1,000 visiting scholars at MIT are Soviet, and the school has hired nine other Soviets for permanent positions.

MEDICAL DETECTIVE BIOLOGIST EUGENE SHPAER HELPED VERIFY THAT A FLORIDA DENTIST GAVE AIDS TO FIVE OF HIS PATIENTS

At Princeton University, there's physicist Alexander Polyakov, whom "any first-class physics department would like to have," says physics Chairman A. J. Stewart Smith. Yale University's math department boasts Gregory Margulis, a specialist in geometry and number theory, as a full professor. And after a thorough search, the University of Washington recently hired émigré Boris Spivak, a solid-state physics expert.

The U. S. computer industry is also reaping benefits from the influx of Soviets. In Berkeley, Calif., Chris Doner, president of Access Softek, recently hired three émigrés for full-time jobs and took on five part-timers, including one in Moscow, to help develop software to work with Microsoft Corp.'s Windows. He found the talent aft placed an ad in a local newspaper– some 40% of those responding émigrés. "The real opportunity day is not selling things to the sians but making use of their tal he says.

'IQ IMPROVERS.' When it comes to ware development for video games hard to rival 36-year-old Alexey nov, creator of Tetris. A gam which geometric shapes must aligned into solid rows, Tetris is aged with each of the 9 million held Nintendo Game Boys sold in U. S. Pajitnov came up with the while working on artificial intellig at the Computer Center of the Academy of Sciences in Moscow. now working at B Proof Software in mond, Wash., on a t year visa, with an o to stay for another t years. "This is profit for me and for [U. S.]," he says.

Using a dated IBM computer, Pajitnov developed a sequel t tris, called Hatris. B Proof founder and D tor Henk Rogers Soviets tend to s clear of repetit shoot-'em-up games prefer "IQ improvers

Some Russian émi who came to the U. S fore 1985 are now f ing their own soft companies—and tur to Russian newcome fill crucial spots. At ware Emancipation nology in Boston, fo ample, founder Vla P. Geisberg boasts t of his 11 employees are Soviets, in ing 3 recent arrivals. A mathemat who emigrated in 1980, Geisberg tracted to the Soviets' "superior" puter-language skills, as he aim develop software that will speed development of computer package

Putting all the pluses for the aside, there are concerns that the flow of Russians will cripple the S Union at a critical moment. But deev and others argue that hiring grés and finding posts, however porary, for those who might other languish back home, may be the way to salvage Soviet science. ence," Sagdeev says, "is an inte tional treasure." Many of the Russ may eventually follow in the foots of other foreign nationals who cam

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the U. S. for education and work, only to return home later with higher standards and skills.

Whatever it means for the shattered Soviet Union, a growing number of experts argue that the U. S. should try harder to absorb the Soviet intellectuals. Clearly, the U. S. could make better use of the talent that is already here. Of the 50,000 Soviet refugees allowed into the U. S. last year, about 800 were PhD-level scientists, and about 8,000 more were engineers. Many of them are underemployed.

The U. S. should create grants to help integrate Soviet émigré scientists into the work force, says Hopkins' Kaplan, who emigrated in 1979. Ultimately, he argues, that will give "American science and industry an extra push to become more vigorous and compt in this rapidly changing world even without the extra push, th sians are beginning to make mark in America.

By Joyce Barnathan in Colleg Md., with John Carey in Washingto Cuneo in San Francisco, Patricia K Moscow, James E. Ellis in Minn and bureau reports

THE RUSSIANS AREN'T COMING. THEY'RE HERE

The neat rows of business awards hanging on the wall behind Naum Staroselsky's desk make him a bit uncomfortable. There is the 1986 Small Business Innovation Award from the U. S. Small Business Assn., the 1986 Inventor of the Year from the State of Iowa, and the Midwest's Entrepreneur of the Year for 1990. "I do have my pride," the scrappy 58-year-old Russian immigrant says in heavily accented English, "but not these things on the wall."

His pride is 15-year-old Compressor Controls Corp., a thriving high-tech enterprise set smack in the middle of an old cornfield just outside Des Moines. Staroselsky, a mechanical engineer with a PhD from Leningrad Polytechnic Institute, took an idea he brought with him from the Soviet Union and turned it into a $13 million business. The electronic device he invented to keep gas and oil compressors running efficiently is used by many big U. S. oil companies, such as Exxon Corp.

STAROSELSKY RECRUITING SOVIET ENGINEERS

From the start, Staroselsky tapped talent flowing out of the Soviet Union. Already, 13 of his 100 employees are Russian. After the failed coup, Staroselsky is bullish about breaking into the Soviet market, with its vast oil and gas reserves. He has just concluded three deals with the Russians—and three more are in the works. He's recruiting more Soviets. "We've got the brain drain right here," says R&D Director Robert Sibthorp.

Staroselsky prefers Russian engineers, who he says think big: their professional education favors breadth of knowledge over specialization. What's more, hardships endured back home helped them cultivate special skills. "In Russia, the components are very, very poor," he says. "So Russian engineers have to be very innovative and assume the worst. They make a system work in spite of its components."

Grabbing his lapels, Staroselsky struts down the corridors of his headquarters, pointing out former Soviets. Most prominent is Leonid Sharansky, brother of famous human-rights activist Natan Sharansky. Leonid Sharansky put his career on hold for nine years to lobby on behalf of his imprisoned brother. Affectionately called "Lenny Saranwrapsky" by his colleagues, he's now the head field engineer, and his wife, Raya, also an engineer, does computations for new control systems.

While an American engineer with 10 to 15 years' experience would demand much more, for $30,000 Staroselsky can hire a seasoned Russian émigré with an advanced degree to shuttle around the world at a moment's notice. "These people are starting from scratch in the second half of their lives," says project manager Victor Borodkin, who emigrated in 1976.

The hard-driving Staroselsky sets the pace. When the Soviets eased limits on Jewish emigration in 1973, he bolted. By then, he had 14 patents on control devices for turbomachinery. V he arrived with his wife and s Rome, a transit point, he learned the Jewish community in Des M was eager to sponsor two fam Staroselsky and a friend voluntee

He spoke not a word of Englis first, he and his friend worke draftsmen, but soon a group of businessmen, some of them Ru immigrants from an earlier wave cided to back them in a startup e prise. In 1978, Staroselsky began duction of a computerized contr the size of a VCR. Since then, the pany has grown at least 20% to 2 year—and 40% in the first half of

SOUNDING OFF. Staroselsky ad there are problems with hiring So They don't like five-year plans, t building exercises, or slogans, w sound like propaganda. They r committing anything to writing. U communism, workers feared takin sponsibility for their actions. Sic hearing the party line, Russians not to be good listeners. Nor are good salespeople, at least at the s "Russians, being a product of a so where the individual was not much ued, don't know how to present t selves," he says.

Although he's a demanding Staroselsky likes to invite employe his sprawling house, modeled on Petersburg mansion, with ceilin floor windows and parquet floors drinks and food *à la russe*. He sound off about poor performa "My boss got mad once and yelled and visit the hell,' " kids Paul Ne 29, a software engineer from Iow

The Russians keep coming. Vlad Yarigin just hired on as a sales neer to drum up new business in sia. Stan Pshonik, a former Soviet nalist, is already rapping out Rus language manuals on a makes Cyrillic keyboard. At this rate, S selsky may soon have more award hang on his walls.

By Joyce Barnathan in Des M

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When the Platte River Power Authority wanted to keep the Colorado air mountain fresh, who did they turn to?

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Based on "Washington crosses the Delaware" by Emmanuel Leutze. Photo: J. Bouz

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KRIS MATSON HELPED THIS WORKER GO FROM A BAD ACCIDENT INTO A NEW CAREER.

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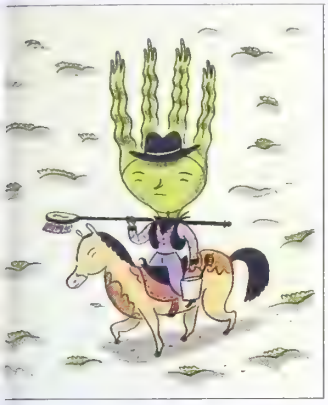
BY PAMELA J. BLACK

CHING UP THE PRAIRIE 'H MICROORGANISMS



The vast prairies that once covered the Midwest are mostly gone now. But ecologists studying the vestiges of this ecosystem are finding new species that may prove useful.

In one patch of restored prairie, Wayne Nichols, professor of biology at Washington University, has discovered more than 500 species of algae, most of new to science. One, *Sphaerellocystis aplanosporum*, ems the unique task of removing iron from the soil. This ater also can extract the metal from laboratory cultures elect iron from among a group of elements. Another s craves silica. Its presence helps make clay soils more able. Nichols is cataloging these new species in a compre- ve data base that also characterizes the enzymes in the rganisms and how they react to antibiotics. Ultimately, esearchers, science could put these newly discovered s to work: The iron-eater might be used to help balance with too much iron, or to clean up contaminated soils.

CIDE PREVENTION Y GET A BIOCHEMICAL BOOST

hy does one depressed person struggle through life's darkest moments, while another decides to end it all? studies by Dr. John Mann of Western Psychiatric Insti- in Pittsburgh offer biochemical answers. By examining rains of suicide victims, Mann has discovered that the s of a key brain chemical, serotonin, are up to 50% lower icide victims than in the brains of people who died in ents. Similarly, by measuring the metabolic by-products otonin in spinal fluid, Mann also has found that serotonin s are lower than normal in many people who had made us suicide attempts.

e abnormalities turn up in a region of the brain associated emotion and the control of impulses, suggesting that a onin deficiency might intensify depression or boost hts of desperate remedies. If that's so, says Mann, scien- may be able to spot and correct this deficiency, thus enting many of the 32,000 suicides in the U. S. this year.

IMPLE WAY TO TURN SAND O SILICON COMPOUNDS

rdinary beach sand were gold, we might all be richer. ll, now it may be as important as gold—black gold, that niversity of Michigan scientist Richard Laine has discov- a very simple formula for making chemicals, polymers, eramics from silica instead of petroleum. This could cut rican dependence on oil and related products, says Laine. rrently, it's more expensive to make silicon-based materi- an those derived from oil. Sand must be heated to about F to produce a metal-grade silicon that then reacts with other chemicals to create materials such as rubbery seals on space craft, surgical implants, and glass. Computer chips are made through a different process.

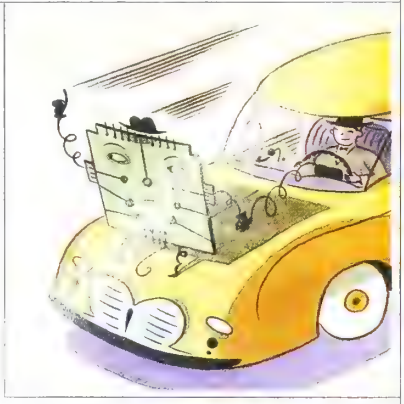
Laine's method is both cheaper and easier. Heating ethylene glycol, potassium hydroxide, and sand at only 300F breaks silica into new compounds—without going through a metal phase. It's "analogous to mixing beach sand with antifreeze and Liquid Plumr," says Laine. His formula could also yield a range of novel products such as a substance that would fireproof wood; a clear, electricity-conducting polymer that could be made into windshields that can be heated to melt ice or snow; and a liquid-crystal compound such as that now used in watch displays, which could be used in space because it remains stable at high temperatures.

FOR PROBLEM PREGNANCIES, AN EARLY-DETECTION TEST

Circulatory problems, malnutrition, or diseases such as AIDS can impair the flow of blood and glucose through the placenta to the developing fetus. Although this doesn't permanently harm all fetuses, it can cause low birth weight, learning disabilities, retardation, or even death. Current tests for placental problems are reliable only after 18 to 20 weeks of pregnancy. Now, researchers in Israel have found a technique that would spot trouble four to six weeks after conception—when the fetal brain is first forming.

Current procedures rely on ultrasound to measure blood flow from the placenta to the fetus and from fetal heart to brain. The new test measures the ratio of two hormones in the mother's blood and urine, says neurochemist Ephraim Yavin of the Weizmann Institute of Science in Tel Aviv. The hormone ratio varies in response to disturbances in the flow of oxygen. So far, the new technique has been used only in animal studies, and as yet there is no treatment for such problems.

A MICROMACHINE THAT CUTS AIR-BAG COSTS

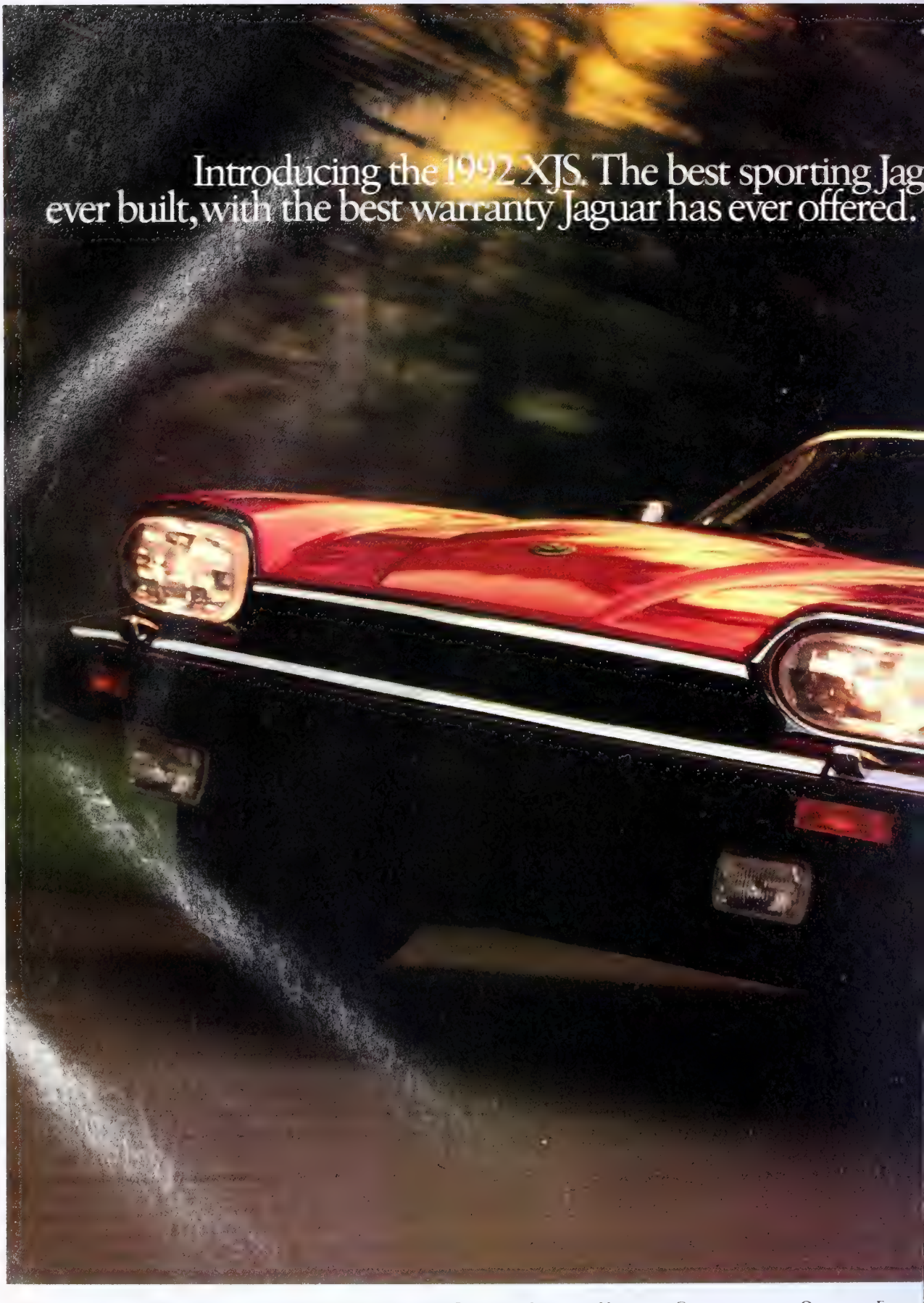


MICHAEL KLEIN

Researchers in a few university, corporate, and government labs have built the first rudimentary "micromachines," devices with moving parts such as microscopic gears etched from silicon. Now, Analog Devices Inc., a Norwood (Mass.) chipmaker, has passed the experimental stage and put the world's first micromachine on the market.

The company designed an air-bag trigger with a comb-like gauge machined from pure silicon. The gauge works by measuring minute changes in an electrical current that holds the 48 microscopic teeth of the comb rigid. The force of the collision acting on the teeth causes the current to change, triggering the air bag.

By making its sensors in a high-volume process, Analog Devices expects to sell the chips for just $5 each, a fraction of the $20 to $50 cost of mechanical switches now used in auto air-bag systems. The first cars to employ the microchip triggers could appear in 1994. Analog Devices is working on other micromachined sensors for controlling automobile suspensions.



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TELL IT TO HE ARBITRATOR'

national legal panel wants to abolish costly job-dismissal trials

Wanda J. Anderson was furious last year when Duke University Hospital fired her for missing too many days of work. Doctors' ointments had kept her out from her as a food preparer. And as a five-r employee, she thought it unfair to dismissed without warning. So she d a complaint with the university's itration board. A panel of university cials heard her story and her boss's. ee weeks later, Anderson was back vork with the understanding that she ıld be fired immediately if she missed many days over the next year. She n't. "No one gave me a chance until I ıt to the board," says Anderson.

nderson's story may become typical he next several years. This summer, ıational legal commission charged drafting proposed state laws or sted a new em- ent statute that send let most fired es take their a neutral arbi- MEN r. In states that such laws, virtu- all private-sector loyers would be ired to set up a ess similar to the one Duke lled eight years ago. Em- rs would either rehire work- ith whom an arbitrator sid- pay them up to three years' nce.

OF SENSE.' Such a system bring a sea change to the rbulent relationship between em- and workers. Under a century- l doctrine called employment-at- panies can fire employees at the a hat. Over the past decade, , tens of thousands of people d lawsuits charging unfair dis- Courts in some 45 states have such cases, undercutting the nent-at-will doctrine to various The result: jury trials and large awards for a growing number Employees.

ommission, called the National ce of Commissioners on Uni- te Laws, says its plan would cover some 60 million workers. A quasi-official body funded by the states and composed of lawyers appointed by each state, the commission cites studies estimating that up to 10% of the 2 million workers who are fired each year would have valid claims under the model law—without resorting to suits. "This would be the biggest change in employment law since the 1964 Civil Rights Act," says Theodore J. St. Antoine, a University of Michigan law professor who helped draft the model law.

HOW ARBITRATION WOULD WORK

The National Conference of Commissioners on Uniform State Laws has proposed a system of arbitration to curb lawsuits by dismissed employees:

- With suits no longer permitted in most cases, a fired employee would file a complaint
- Each side would make its case before an arbitrator
- If the employer won, the firing would stand
- Employees who won would be reinstated or get severance of up to three years' pay

DATA: NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS

Although it will be years before many states act, several key ones may do so relatively soon. Groups such as the AFL-CIO and the American Civil Liberties Union will push the idea. And many companies may, too. In states where employers have been hit hardest, such as California, Michigan, and Illinois, "this statute makes a lot of sense," says Jim Paras, a member of the U. S. Chamber of Commerce's labor-relations committee. He says the chamber likely will support the idea in such states but oppose it where employment-at-will hasn't been abridged by the courts.

In California, where the courts have been the most active, workers win 70% of jury trials and collect awards averaging $300,000 to $500,000, the commission says.. And that's before legal costs. Clyde W. Summers, a University of Pennsylvania law professor, says companies spend an average of $75,000 in legal fees on such cases, which can drag on for a year or more. Workers spend up to $40,000. By contrast, arbitration takes a few weeks and costs about $15,000—total—per case, says Summers, who advised the commission.

MORE JUSTICE. Employee groups don't like the current system either. There is little hope of challenging a dismissal in states such as Georgia, where employment-at-will has been eroded only slightly. Even in California, a suit's outcome is highly unpredictable, as is any jury trial. What's more, it's primarily middle- and upper-level employees, not hourly workers, who bring suit. "They're the only ones who can afford it," says Paul Grossman, a Los Angeles management attorney who helped draft the proposal.

These lucky few might not fare as well under arbitration. But many more workers would be protected, in much the same way as grievance procedures protect union members. "The model law eliminates the jackpots but gives a reasonable measure of justice to everyone," says Summers.

At least one group doesn't like the idea: trial lawyers, who often get fat fees if they win employment-at-will cases. Lawyers' groups could thwart support from both business and labor. "They're very strong in some states," says Lewis L. Maltby, an ACLU lawyer.

Still, arbitration looks likely to catch on. Montana and Puerto Rico have passed arbitration statutes. And a dozen states are considering the idea. If more follow the commission's proposal, a lot more employees will get a second chance after the boss says: "You're out."

By Aaron Bernstein in New York, with Zachary Schiller in Cleveland

> Arbitration would eliminate large settlements—but would protect more workers

ROB DOYLE BW

MOVIES

WISH UPON SOME STARS: *HOOK* CAME IN THREE WEEKS LATE AND $11 MILLION OVER BUDGET

HOOK HAS HOLLYWOOD WAITING WITH BAITED BREATH

Will the Spielberg spectacular bring in the Christmas dollars?

In *Peter Pan*, J. M. Barrie's classic, Peter urges children to clap if they believe in fairies. If they clap hard enough, Peter promises, they will revive a dying Tinkerbell.

Too bad life doesn't really imitate art. If it did, Hollywood would be applauding till its hands went numb. Its fervent hope: that the Dec. 11 opening of *Hook*, Steven Spielberg's adaptation of the Barrie play, will awaken a box office that's entering its eighth narcoleptic month.

Hook, the reasoning goes, could be one of those "event films"—a must-see that will get customers back into the theaters. Hollywood could use the business: Box-office receipts so far this year are off more than $163.5 million, according to *Daily Variety*. The decline—4.3% from a year ago and 6% from 1989—has come about even though ticket prices have increased. Except for a brief flurry during July, when *Terminator II* and *Robin Hood* did a land-office business, receipts have been sliding since April. This summer's box office was off by 25% from 1990 and was the lowest since 1971.

There hasn't been much of a pickup since. "We're running out of reasons why we can't get people into the theaters—are they just staying home watching TV, playing parlor games, or what?" frets Tom Sherak, executive vice-president for marketing at News Corp.'s Twentieth Century-Fox Film-Corp. unit. It's highly likely that bud conscious consumers are passing u creasingly costly trips to the local B But exhibitors pin most of the blam Hollywood's inability to make pict that audiences want to see.

For much of the past year, Hollyw has been retrenching. Studios h slashed production budgets and put ginal products on hold. But no execu worth his table at Spago is going trust in frugality during the crucia weeks from Thanksgiving to Christ a season that can account for as m as 25% of annual box office receipts

BIG GUNS. So Hollywood is rolling the big guns (table). Paramount tures, in the midst of a managen shuffle, is putting heavy marketing merchandising muscle behind *The dams Family*, the spin-off from 1960s' TV show that it picked up March for $14.6 million from ailing O Pictures Corp. It is also trotting out sixth *Star Trek* flick, promoting the anniversary of the sci-fi TV show.

The names are familiar over Warner Bros. Inc., too: Oliver Sto *JFK* stars Kevin Costner as a New leans prosecutor investigating Presi Kennedy's assassination, and Bruce lis stars in *The Last Boy Scout*.

Most eyes are on Sony Corp., hov er, which has spent lavishly to rej nate its two film subsidiaries, Tri-S and Columbia Pictures. Tri-Star's *H* which stars Robin Williams as grown-up Peter Pan and Dustin H man as Captain Hook, came in th weeks late and $11 million over its million budget.

Sony's film units could have anot winner with Columbia's *The Prince Tides*, a drama featuring Barbra S sand and Nick Nolte. With ga ster movies generally bombi there's less confidence about an er project, Tri-Star's *Bugsy*, a story that features Warren Be as gangster Bugsy Siegel.

The crush of yearend films c be too much for a sluggish ma to absorb, and good films could lost in the crowd. Possible w flowers this year include Disn *Father of the Bride*, which s Steve Martin in a remake of 1950 Spencer Tracy-Elizabeth T lor film. Or it might be Fox's *the Boys*, featuring Bette Midle the lead singer of a USO troupe

Then again, Martin and Mi could make it big while Spielber Co. bomb. That would probably acceptable in Hollywood. Ri now, any hit will be magic enou

By Ronald Grover in Los Ang

A SAMPLER OF HOLIDAY FARE

1991 market share* Percent		Movie	Budget Millions
TWENTIETH CENTURY-FOX	14.4%	*For the Boys*	$33
WARNER BROS.	13.4	*The Last Boy Scout*	28
		JFK	35
DISNEY	12.3	*Billy Bathgate*	45
		Father of the Bride	30
		Beauty and the Beast	28
UNIVERSAL	11.1	*Cape Fear*	35
		American Tail 2	25
ORION	10.5	—	—
TRI-STAR	10.2	*Hook*	60
		Bugsy	40
COLUMBIA	9.5	*The Prince of Tides*	27
PARAMOUNT	9.1	*The Addams Family*	30
		Star Trek VI	30

*Through Oct. 6

DATA: *DAILY VARIETY*, BW ESTIMATES

Swissair
Timetable
Horaire
Horario
and way to the world

ILLUSTRATIONS BY TROY THOMAS

:'s a fascinating spectacle. The people and institu- ions whose unrelenting use of debt fueled the Ex- :essive Eighties are suddenly quiescent, even con- . Once-mighty real estate barons are quietly filing bankruptcy court. Even the Street's top names are he defensive. When Salomon Brothers Inc. fessed o manipulating government note auctions, it was a of the times that Chief Executive Warren E. Buf- broke with Wall Street's tradition of genteel defi- e by making an elaborate, formal apology.

all it what you will. Perhaps what we are entering n Era of Atonement, in which we all must suffer the reckless ling practices were endemic ng the 1980s. ely, taxpayers be rending r 1040s for rs to come, as / foot the bill— he tune of $500 on—for the in- ıpetence and ıdacity of sav- s and loan exec- es and the ne- :t of state and eral regulators. sier to grasp n that huge ı is the sting of unemployment visited upon legions refugees from financial-services firms and leveraged outs. And the cruel consequences of the credit nch can be found everywhere.

'et those harsh realities are molding a new, and mately firmer, financial terrain, as mapped out in pages that follow. "Deleveraging" is in, though y the healthiest companies have been able to latch o the resurgent stock market ge 114). Fortunes are being de by a mélange of investors, yers, and restructuring spe- ists who are riding the surge corporate reorganizations (page). But for the survivors in the ancial-services industry, cau- ı is the byword. With economic wth expected to be slow for rs to come, banks and insurers not likely to once again fall e ninepins before the charms of ional real estate barons such Atlanta's John Calvin Portman (page 116). With bank purse strings drawn taut, many buyers have been unable to snap up depressed properties. That may be just as well, because the real estate doldrums may have a few years to run.

Empty office towers are but the most visible signs of the challenge that is facing the world of finance. As the financial-services industry shrinks still further, the layoffs that have already plagued Wall Street will spread through banks and insurance companies (page 118). Investors, who have already seen "safe" income vehicles such as annuities turn sour, may face years of picayune yields (page 122).

FINANCING THE 90s

OUT OF THE WRECKAGE, A HEALTHIER, SANER ERA

Meanwhile, regulators are engaged in the most extensive reevaluation of the financial-services industry since the 1930s (page 128). Now, they will have to find a perhaps-elusive happy medium between two extremes: bearing down so hard that the credit crunch continues, or reverting to the anything-goes posture of the Reagan years that created the mess in the first place.

Look closely at the process of retrenchment and reorganization that is unfolding. Yes, the pain is real. But financial companies are not engaged in self-immolation. Rather, they are in a healthy process of regeneration. The system that will emerge will be leaner and stronger, better able to take advantage of the innovations of the 1980s while less prone to repeat the era's abuses.

Indeed, the first firms to feel the bite of the new era—Wall Street brokerages—are beginning to emerge from their ordeal. Their payrolls long since pared, securities firms are on the rebound. Profits are up sharply, balance sheets are being strengthened, initial public offerings are coming back, and some firms are even hiring. It's a far cry from the riproaring '80s, of course. And in light of the aftermath, what else is there to say but "amen"?

By Gary Weiss in New York

COMPANIES Recovery isn't about to ease the credit crunch...PAGE 114

REAL ESTATE 'A lot more pain to come'.....PAGE 116

FINANCE For firms still standing, a favorable prognosis .....PAGE 118

INDIVIDUAL INVESTORS They're playing a riskier game.....PAGE 122

WORKOUTS Plenty for all at the bankruptcy banquet.....PAGE 124

GOVERNMENT Will regulators get tough—or too tough?.....PAGE 128

THE TIGHTWADS ARE RUNNING THE SHOW NOW

And this time, recovery isn't likely to ease the credit crunch for capital-starved companies

FINANCING THE 90s

"High leverage" is a term no longer acceptable in polite society. With the stock and bond markets hitting new highs, companies by the hundreds are scrambling to deleverage, by floating equity issues to retire debt or by replacing debt with lower-coupon paper.

Unfortunately, a far greater number of companies remain walled off from fresh capital. They include many large companies with problematic balance sheets and most of the 90% of Corporate America with below-investment-grade pedigrees. Banks, shell-shocked from billions of dollars of bad loans, are the most stingy lenders. But insurers, mutual funds, overseas investors, and other capital sources have also sharply cut back their lending (chart) to borrowers other than prime credits. All of this spells trouble for the 1990s, for below-investment-grade companies are the employers of most Americans and are often the incubators of tomorrow's growth.

For chief financial officers, the lesson is clear: Access to capital is emerging as the crucial factor in corporate success. The business world is dividing up into two tiers: those companies that can get capital and those that can't. Those that can't are usually the ones that need it most.

PATCHING CRACKS. Consider a tale of two credits: USG Corp. and Hershey Foods Corp. USG, the nation's No. 1 wallboard maker, fended off a raider in 1988 by pumping debt up to a backbreaking $2.6 billion, paying yearly interest rates as high as 16%. When the housing market fell apart, so did the Chicago gypsum-producer's ability to pay the horrendous interest tab. With the company deep in the red, no one will lend or invest another dime. To keep the company from falling into bankruptcy, Chief Executive Eugene B. Connolly is forced to perform the sad 1990s ritual of begging creditors to exchange their bonds for lower-paying paper or for the nearly worthless stock.

Hershey is everything USG is not. The candy and pasta company's profits are undented by the recession. With its sterling credit rating, Hershey in February easily floated a $100 million bond issue paying 8.8% and is using the money to build two new plants. Says Chief Financial Officer Michael F. Pasquale: "There's no credit crunch for me."

Spooked by the surge in business fail-

PHOTOGRAPH BY JOHN MADERE (GRAPH BY JAMIE REAL-HAMILTON)

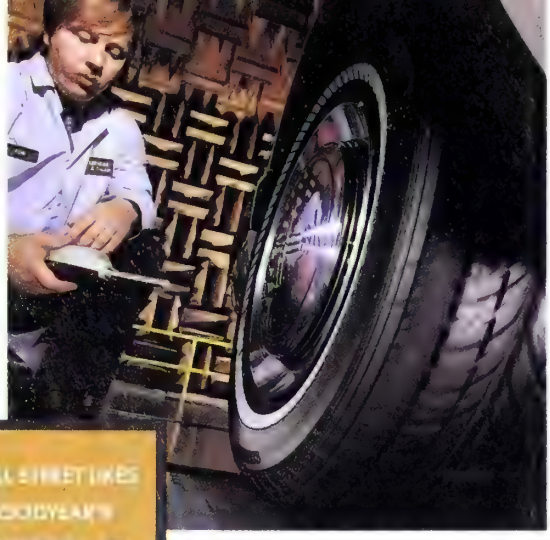
es, capital providers have seldom en so choosy. In every recession, course, they tighten up their stan- rds and won't deal with risky oper- ions. This time, though, they're ugher, refusing financing to al- ost anyone who has too much debt. ore ominously, they intend to stay htfisted long after the recovery mes. Says Frank V. Cahouet, airman of Mellon Bank Corp.: "A hole segment of companies won't t financing and will atrophy. You'll ve to wait four years for this to osen up."

OREIGN FALL-OFF. Banks e the most prominent skin- nts. Regulators have pres- red them to avoid high- leveraged borrowers. larmed that a continued ump will blight his reelec- on campaign next year, resident George Bush is ying to get federal bank aminers to ease up. But en if they comply, it's ubtful that will spur much more lend- g. Reason: The banks can't afford to ke on new ventures because their own fi- ancial performance is hurting.

The tightwad ethic is as strong among ie less regulated institutions, such as in- rers and mutual funds. Consider how ey've shied away from one of their fa- rite vehicles: private placements, which e direct purchases of securities from mpanies that usually are small and less editworthy. Those fell 27% in 1990 and is year are expected to slide 8% more.

Even overseas investors, who have long vored the U. S. as a stable and easily ac- ssible place to put money, are thinking vice. For the first half of 1991, foreign in- estment in American companies was a ere $7.6 billion—less than a third the lev- l for 1990's first half. Compared to the 980s, that's pitiful: Overseas investment the U. S. peaked at $71 billion in 1989. Those days are really gone," says David . Strongin, director of international in- estments at the Securities Industry Assn. rade group. A cheap dollar should make . S. investments attractive. But while a ew foreign money mavens are investing U. S. institutions, most are preoccupied ith problems at home. Japanese inves- ors are pinched by their wobbly stock and eal estate markets. Europeans are busy ghting their own recessions, getting eady for the falling of trade barriers on he Continent next year, and helping priva- ize Eastern Europe.

Initial public offerings of stock may ave become popular lately, but a lot of ompanies still are shut out of the IPO par- y. High-tech, health care, and specialty re- ailing are hot; steel, chemicals, and pub- ishing are not. Especially if a lot of debt is n the balance sheet. That was the fate of



Multi-Local Media Corp., a heavily indebted publisher of regional yellow-pages directories that sought to raise $60 million in the stock market last April. The Rockville Centre (N. Y.) publisher had shown three years of solid growth, and it had big plans for the future. Still, buyers were willing to pay only a fraction of Multi-Local's $11 asking price, and the company pulled the offering.

None of this means that investors and bankers are keeping their wallets shut for all comers. Even some highly leveraged enterprises can get cash or capital—as long as they happen to be companies such as RJR Nabisco Inc., whose recession-resistant consumer products deliver a torrent of cash flow.

CRUISING ALONG. Goodyear Tire & Rubber Co., the country's top producer of tires, doesn't enjoy such a bountiful cash flow. But analysts still feel it will be able to raise the $423 million it's seeking in a stock offering to ease its hefty debt burden. Wall Street likes the company's earnings potential under its highly regarded new CEO, Stanley C. Gault. The fresh capital would reduce Goodyear's 66% debt-to-capital ratio. "Our goal is to get below 50%," said CFO Oren G. Shaffer before the offering.

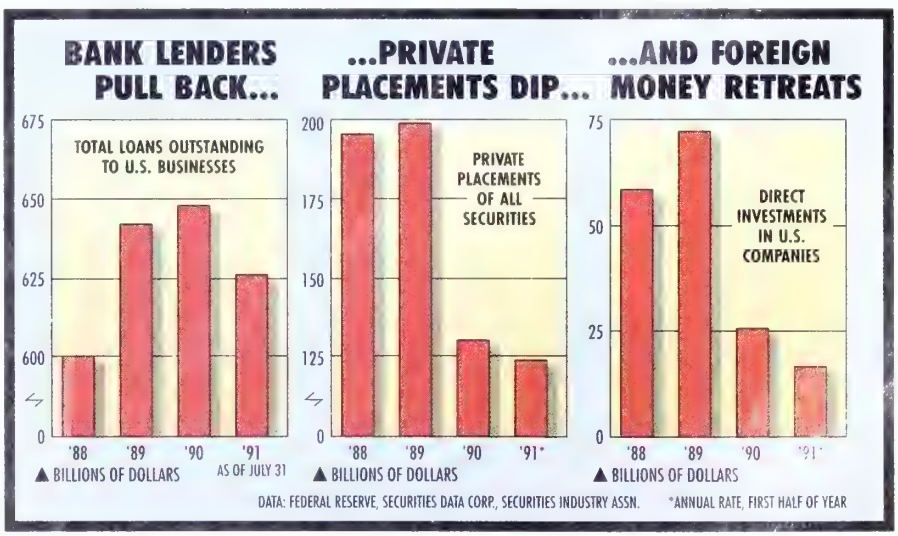
Some less standard sources of financing are emerging to serve credit-starved companies. Several new investment pools take minority positions in promising new middle-market companies that aren't ready yet to do an initial public offering. Lawrence C. Tucker, a partner at Brown Brothers Harriman & Co., says his firm's 1818 Fund looks for "a sector with promise and good management, which also has a sizable equity stake."

Commercial finance companies also are leaping into the breach. Their lending activity has shot up almost 30% from last year. Their loans usually are secured by the borrower's plant and equipment or by accounts receivable. The downside is that these loans are often of shorter duration than bank borrowings—2 to 3 years vs. 7 to 10—and cost more, often two percentage points.

Another financing source enjoying a boom is barter, which allows cash-short companies to swap goods and services. Since 1989, these deals have climbed 15%. While the appetite for barter is limited in America's cash-based economy, this is a way to save money at the margin—up to about $1 million per deal. Icon International Inc., a New York barter firm, arranges exchanges of broadcast ads for items ranging from hotel rooms to root beer.

These capital providers will ease the pain for thousands of companies shut out of conventional markets. As the economy recovers, mainstream lenders and investors will become more forthcoming. Still, the near-term prognosis echoes that old anticapitalist Karl Marx: The rich will get richer, and the small or highly leveraged will have to fight to survive.

By Larry Light in New York, with David Greising in Chicago and bureau reports



'A LOT MORE PAIN TO COME'

Real estate developers and lenders are locked in a grisly embrace

FINANCING THE 90s

Founded on vast optimism and funded by eager lenders, the prestigious Portman real estate realm has foundered in the lousy property market of the '90s. Like other high-flying developers who have come to grief in the past two years, John C. Portman Jr. never figured that demand for his gargantuan projects would flag. But in 1990, massive vacancies forced Portman into a killing cash crunch. He couldn't service the $2.1 billion in debt that had expanded his empire of concrete and glass from his Atlanta hometown all the way to Shanghai.

The woes facing Portman, who declined to be interviewed for this story, are shared by legions of other wounded developers, from New York's Donald Trump to Dallas' Trammell Crow to obscure suburban players. The harsh 19.5% office vacancy rate nationwide also is inflicting pain on the banks, insurance companies, and other financial institutions that lent them the money in the first place (chart). The commercial real estate debacle has been the main reason for the wave of big bank and insurer failures this year.

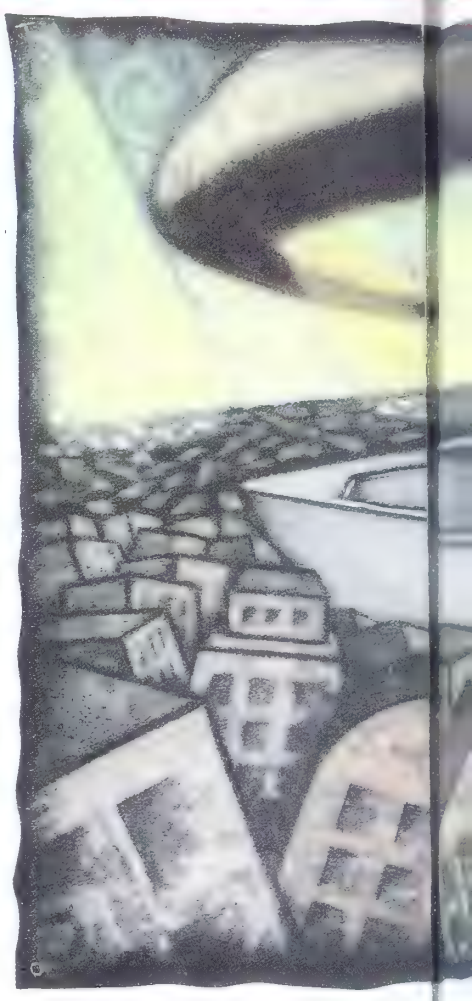
All this misery has radically altered—and complicated—the once simple dealings between borrowers and lenders. Traditionally passive providers of real estate capital, many lenders in the '90s are finding themselves deeply enmeshed in the actual operations of the buildings they have financed. Loan restructurings used to mean merely stretching out maturities and hoping for the best. Nowadays, restructurings mean close involvement in a project's operation, with strict financial-performance targets.

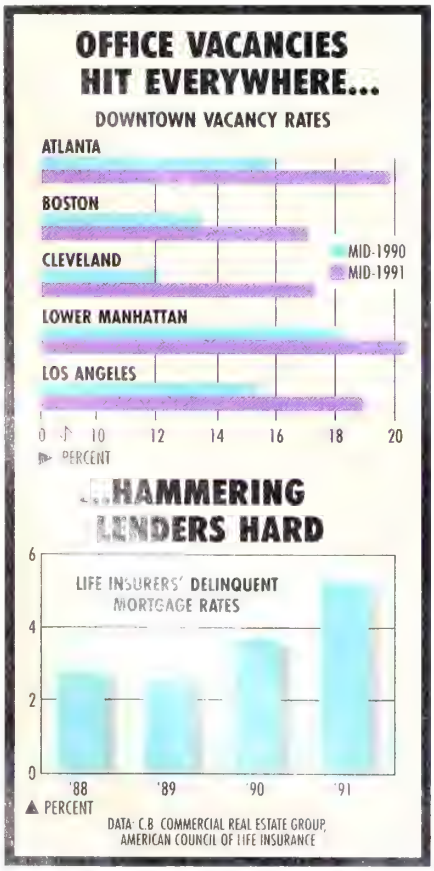
And if that doesn't succeed, lenders aren't shy anymore about foreclosing. They customarily hated the upkeep hassles of owning property. In the past, if they did end up seizing a building, they would sell it quickly. Now, lenders often hire experts to run the place—for years, if necessary. They have no choice. There is no longer an ever rising real estate market to cure a building's distress, allowing a sale at a tidy gain. Says Kenneth Leventhal, a Portman adviser: "In this market, no one can liquidate."

HARD LINE. Typically these days, lenders and fallen borrowers are finding themselves forced into a continuing and sometimes uneasy partnership. Lenders took control of Portman's holdings—his downtown Atlanta Peachtree Center office complex and nearby Inforum, a computer-merchandise mart—and put him on probation. He has five years to turn his finances around by selling or refinancing $140 million worth of real estate. He can request an extension only if he meets cash-flow goals. Crow, faced with defaulting on dozens of mortgages, was bailed out last year by Equitable Life Assurance Society, which refinanced him with a $456 million loan. One hitch: He had to surrender to them a 45% interest in 65 new buildings. For the brash Trump, the experience with lenders has been more humiliating. Last year, he had to cede control of his hotel, airline, and casino kingdom to them and live on an allowance (a paltry $450,000 per month). Lately, they've been making him divest other prize assets.

The lenders' new hard line is a little ironic: They're like the free-pouring bartender who suddenly becomes a firebrand of temperance. During the sweet times of the past decade, banks were easy marks for a developer with an architectural plan and a rosy-sounding revenue projection. Developers often had to put up very little equity, leaving trusting lenders on the hook for a lot. Says real estate attorney Michael J. Shapiro, a partner with Shereff, Friedman, Hoffman & Goodman in New York: "It seemed that the more zeros you added to your loan request, the less you had to put down."

That's what happened with Citicorp and Portman's 60-story One Peachtree Center in Atlanta, which will open next year but is only 40% leased. In 1989, the nation's largest bank made Portman a





who are resisting the seizure. The owners, a partnership led by VMS Realty Partners and developer Bruce Eichner, could not be reached for comment. Legal skirmishing could grind on for a year or more. Even if Citi wins, local real estate brokers say it can only unload the building for $100 million, 60% less than the mortgage.

GRACE NOTE. Worse, lenders sometimes end up squabbling among themselves. By the time he came a cropper last year, the 66-year-old Portman had collected 50-odd lenders. Trust among them ran low. Unsecured lenders Chemical Bank and Germany's DG Bank sued to recover their money. Equitable and Nippon Life Insurance Co. put everyone on edge by cutting a separate deal with Portman: In lieu of loan repayment, they received a 75% stake in Peachtree Center; Equitable bagged 95% of the Inforum computer mart. Finally, after an impassioned plea by a Bank of Nova Scotia representative to work together lest Portman slide into a bankruptcy that would hurt everyone, the lenders agreed to Portman's five-year grace period.

Portman's deal, though, shows that even the most carefully crafted lender-borrower partnerships may not be enough to rescue ailing properties. Portman's future rides mainly on One Peachtree Center, the lone piece of the Peachtree complex in which he owns 100%. Even if it attracts more tenants, the 1.4 million-square-foot building won't get anywhere near the $30-per-square-foot rents envisioned in the project's initial financial projections. Perhaps in anticipation, Citi has written down the value of One Peachtree from $378 million to $270 million, says a key Atlanta real estate figure. The bank won't confirm that.

But there is some good news: Eventually, the market will turn around. New commercial construction is negligible. None of the past decade's lenders, not even the Japanese, want to finance more construction. So the vacancies will be absorbed in the fullness of time, allowing another real estate cycle to begin. But for a developer on a short leash, such as John Portman, that could be a very long wait.

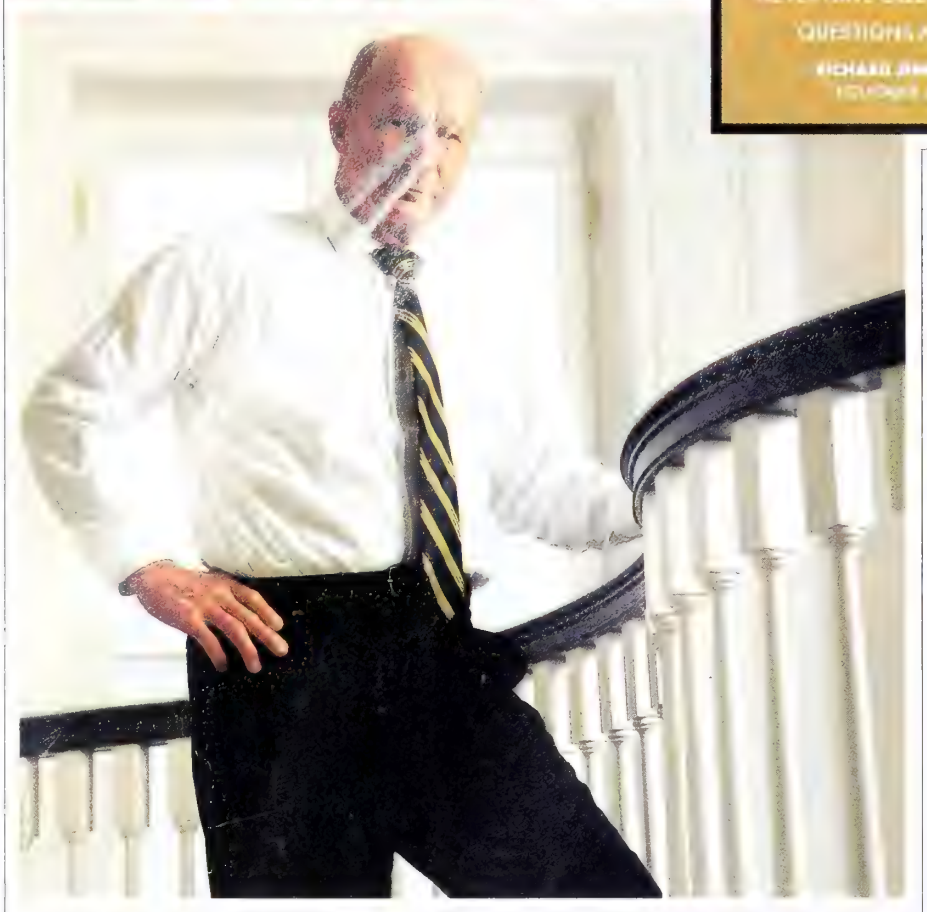
By Larry Light in New York and Chuck Hawkins in Atlanta

$300 million construction loan—and then lent him $78 million for his equity portion, secured solely by his signature guaranteeing repayment. The bank won't comment. One Citi executive involved in the deal says the bankers thought they could syndicate the construction loan to other lenders, but the public disclosure of Portman's difficulties stopped that.

Lenders and borrowers will be locked in their awkward embrace for a long time. The current real estate market slump, the worst since the '30s, is expected by a wide range of experts to persist for four or five years. Says Arthur J. Mirante II, president of Cushman & Wakefield Inc., a major real estate broker: "We are at the very bottom, with a lot more pain to come." Too much excess space was built in the past decade for demand to absorb soon. That's because, even when the recession ends, there likely won't be a repeat of the surge in white-collar and retail employment that spurred the 1980s construction binge. In fact, Corporate America will remain committed to workforce downsizing. Those pink slips will mean more red ink for real estate.

Just about every region of the country is suffering. The vacancy rate in Portman's Atlanta has soared from 14.3% in 1989 to 19.8% in mid-1991. Manhattan, the largest office market in the nation, is burdened by a 17% rate, with the financial district hit hardest.

The higher the vacancy rates, the more likely the new lender-borrower partnerships will degenerate into strife that leaves both sides bloodied. Take the saga of Citi's $250 million loan to build a 41-story office tower in midtown Manhattan. The place is as empty as interstellar space. The bank foreclosed on 1540 Broadway in April and now is embroiled in a court fight with the owners,



OLDER, WISER—AND A LOT HEALTHIER

Financial institutions have come to terms with '80s excesses

FINANCING THE 90s

Richard H. Jenrette knows what it feels like to hit bottom. As chief executive officer of Equitable Life Assurance Society, he found himself having to mount a publicity campaign in December 1990, to counter rumors that Equitable was close to insolvency. Since then, he has been working hard to clean up the company's ailing real estate portfolio and raise much-needed outside capital.

But Jenrette won't forget being raked over the coals by the rating agencies. He says his feelings are best described by the famous line from *Gone with the Wind*, when Scarlett O'Hara swears she will never be hungry again. "With God as my witness, I'll never have credit quality questions again," he vows.

Jenrette is far from the only financial executive to make that promise. Badly burned during the '80s by costly overexpansion and ill-advised investments, banks, brokers, and insurance companies across the nation have developed a zeal for fiscal conservatism. Rampant growth has been replaced by consolidation and shrinkage. Financial institutions are laying off employees by the thousands, selling soured diversification ventures, and often seeking out merger partners.

UNFORGIVING. Although financial executives insist they've learned their lesson, many cynics aren't so sure. They say financial executives often profess prudence during slumps only to shift into overdrive as soon as the cycle shows signs of reversing itself. That could be a big mistake, they say, especially in the slow-growth environment that many predict will characteriz the '90s.

This decade will b unforgiving for othe reasons. Rivalry amon financial institution will become brutal, as deregulation di solves anticompetitive barriers. Mor banks are expected to get equity unde writing powers, allowing them to offe full-service corporate finance service Brokers, in return, are becoming bank ers: Merrill Lynch & Co.'s oversea branches are starting to offer bankin services. The most important compet tive edge may be credit quality. J. P Morgan & Co. will flaunt its AAA ra ing, two notches higher than any U. S investment bank.

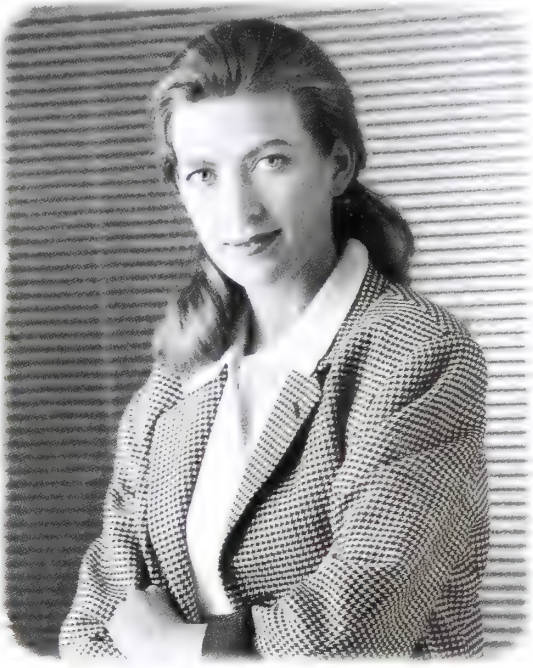
BACK TO BASICS. Those that prevail dur ing the coming melee, though, should b much stronger than '80s players. "Amer ican financial institutions have bee through a drying out after a night of to much revelry," says Roy C. Smith, New York University finance professor "There's more to be done, but the surv vors of this economic ordeal are gettin healthier and more competitive."

Nowhere was the revelry more rau cous than on Wall Street. From 1982 t 1987, the bull market, takeovers, an regulatory laissez-faire resulted in ric profits for the Street. From 1983 to 198 firms expanded their work forces to total of 260,000 from 205,000, a surge o some 27%. They bought fancy building and accumulated big portfolios of risk bridge loans and junk bonds.

And it was on Wall Street that th bubble first burst. After the 1987 stoc market crash, firms were forced int desperate retrenching. Employmen shrank from 260,000 to 210,000. By 199 the industry had hit bottom, with an ag gregate loss for the year of $162 millio Back to basics is the new credo. Firm have cleaned up their balance sheets They are cutting back deal divisions an concentrating on their more mundane re tail, trading, and underwriting opera tions. Partly as a result, Wall Stree firms such as Merrill Lynch an PaineWebber chalked up strong profit in 1991's third quarter.

Those few firms that were already fo cused on bread and butter rather tha caviar during the '80s are best pos tioned for the '90s. A prime example i Dean Witter Reynolds Inc., a division o Sears, Roebuck & Co. Sears spent $60 million in 1981 to buy the broker. A though Dean Witter lost money for th next few years, it invested in its reta sales force. On the institutional side, i avoided junk bonds and merchant bank ing and put its attention on servicin midsize corporate customers and its ow

My Most Reliable Sources.



By seventeen, I was reading three newspapers a day. I remember articles so moving, they brought tears to my eyes. That was when my mother realized I was going to be a journalist. For graduation she gave me a Cross pen and pencil set. Over the years, I've taken it to five continents. My pencil was stepped on during a rally, and my pen is scratched from the fall I took chasing a senator. But, unlike my legs, they still look and function beautifully. When I became Editor, I bought myself a new 14 karat gold filled Cross set. But I always bring the one from my mom with me whenever I go on assignment. I like to think that it's helped me write great articles. Articles like the ones that first inspired me.

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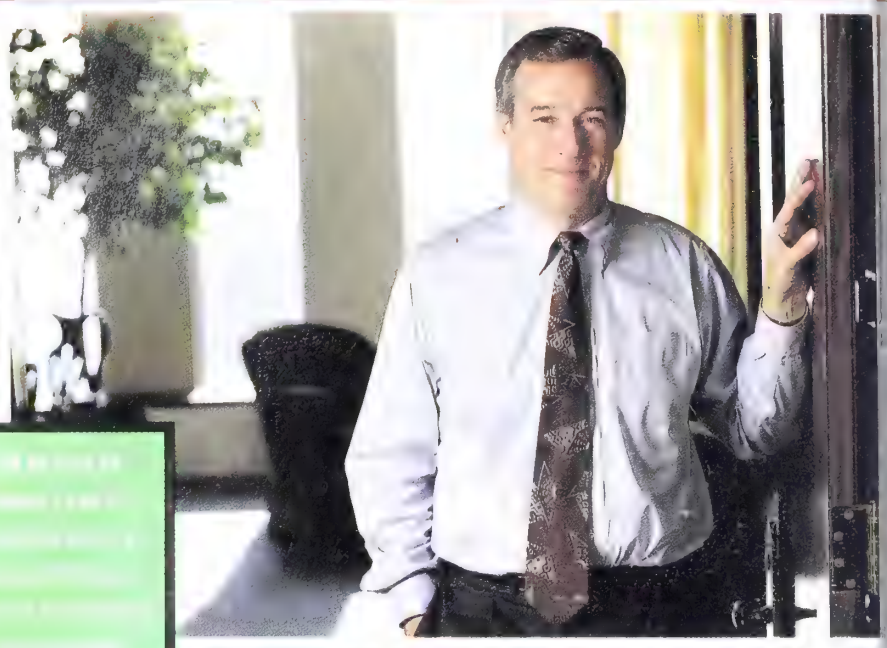
retail sales force. Dean Witter has been pumping out steady profits ever since 1986. "We better be taking care of that customer at a lower cost, because if we're not, someone will come along and push us down the food chain," says Philip J. Purcell, CEO of Dean Witter Financial Services Group Inc.

LAGGARD. Bankers got into much more trouble than brokers, mainly because of huge lending misjudgments. As a result, they have had a much harder time getting back on track. Now, under pressure from regulators, many bankers are repairing battered loan portfolios and capital bases and are slashing expenses. Write-offs for problem real estate loans should peak by year's end. Third-quarter earnings already reflect a recovery. The big laggard, however, is Citicorp, which has yet to build adequate reserves to cover its problem real estate loans.

To many bankers, the current wave of mergers offers the surest path to a healthier future. Take Chemical Banking Corp. and its merger partner, Manufacturers Hanover Corp. The two New York banks anticipate a savings of $650 million in the next four years by eliminating offices, people, and technology. Such moves should give the merged bank a stronger capital base by attracting new equity, executives of the two banks claim. "With an improved credit rating, we can finance ourselves more cheaply and our customers as well," says Chemical CEO Walter V. Shipley.

Chemical is already reaping profits through greater geographic diversification, with its Texas Commerce Bancshares Inc. posting record third-quarter earnings. It has stressed its higher-margin business of lending to midsize American corporations. Its ratio of total equity to total assets rose from 5.15% in 1986 to 5.53% in the third quarter of 1991. "We are a much stronger institution for having [illegible] bank that operates in the narrow New York market to being broadly based in Texas and New Jersey," says Shipley.

SOUR DEALS. Gains from mergers may be harder to achieve than many bankers claim, however. Many deals, such as C&S/Sovran Corp., have soured. The Chemical and Manufacturers merger is taking longer than planned, clouding the outlook for its predicted savings.



The comparatively slow-moving life insurance industry has been the last to catch up with market realities. Like the banks, it was badly damaged by real estate loans. Many insurance companies also found themselves with large junk-bond losses. Not until this year did life insurers find they were much more vulnerable than other institutions in one key area: panic withdrawals by customers, whose policies were insured only by often undercapitalized state funds.

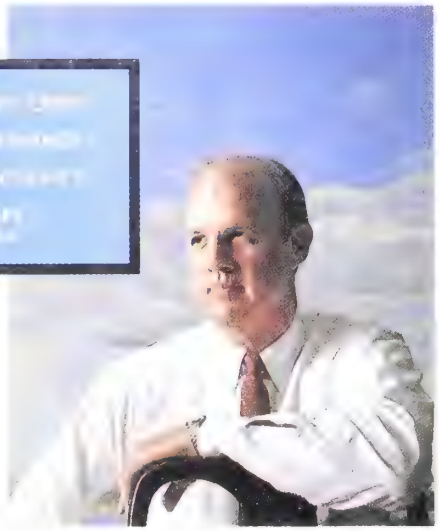
The first alarm was the collapse of First Executive Corp. in April, 1991, because of the declining value of its massive junk-bond portfolio. Then, in July, came the demise of Mutual Benefit Life Insurance Co., which hemorrhaged from too many bad real estate loans.

Today, the insurance industry is belatedly repairing its balance sheets and embarking on its own consolidation wave. Phoenix Mutual Life Insurance Society and Home Life Insurance Co. are discussing what would be the first combination of two major mutual life companies. Further, foreign money, which has been flowing into U. S. banks and brokerages, is targeting the insurance industry. In 1990, Switzerland's Allianz bought Fireman's Fund Insurance Co.

RIGHT DIRECTION. Equitable is a perfect example of a large, troubled insurer on the road to recovery. It has attracted $1 billion in capital from French insurer AXA and has embarked on a plan to shift from a mutual to a publicly traded company by selling stock sometime in 1992. Already, the company has a 7% ratio of equity to liabilities, compared with 4.3% five years ago. "I see the industry becoming leaner, pricing its product better and having more access to capital," says Equitable's Jenrette.

While there will still be setbacks ahead for insurers, bankers, and brokers during the '90s, especially if the economy remains weak, there is a trend toward a healthier system. NYU's Smith believes that those institutions that survive the shakeout will have a global competitive advantage. The reason is that deregulation in the U. S. is much further along than in Europe and Japan, where financial oligopolies are still protected from the full range of market forces. "The U. S. is going through its ordeal first," says Smith. As with a group of reformed alcoholics, the trick for U. S. institutions will be to avoid the ever-present allure of another destructive round of revelry.

By Leah Nathans Spiro in New York



In a surprise turnaround, three of Germany's top automotive journals rated the new Audi 100 V-6 better than the Mercedes 300E 2.6 and the BMW 525i.

NEW AUDI 100 HAS GERMAN MOTORING PRESS DOING A 180°.

Long regarded as the reigning monarchs of German performance sedans, Mercedes and BMW have never had much concern about a possible dethronement. However, that was before Audi engineers unveiled their most impressive achievement to date. The all new Audi 100.

In tests conducted by three of Germany's top automotive journals, the totally redesigned Audi 100 outscored both the Mercedes 300E 2.6 and the BMW 525i.

According to AUTO MOTOR UND SPORT, the Audi 100 took control of the testing early and often, besting Mercedes and BMW in Bodywork, Handling and Control, and Economy. **"Audi has succeeded... in not just drawing level with the competition, but moving ahead of it."**

It would seem that the eight years Audi engineers had labored over this newest of Audis had indeed paid off. As Andres Borchman, editor of AUTO BILD, said, **"The new Audi 100 is no longer number three among the distinguished German marques, but, as the test proves, number one."**

The test journalists at MOT made it unanimous: **"The Audi is clearly the deserving winner."**

Both on the surface and beneath the skin, the new 100 differs dramatically from its predecessors. The styling is more dynamic. The interior is roomier. And the venerable 5-cylinder power plant has given way to a 172hp V-6 engine with superior low-end torque.

One area that wasn't tested but should be mentioned is the Audi Advantage: A program that includes the cost of all scheduled maintenance, even oil changes, for three years or 50,000 miles.

Neither Mercedes nor BMW can top it. Nor can they any longer claim to be at the top of this class. That honor now belongs to the new Audi 100.

AUDI 100S AT A GLANCE

GENERAL: Front-wheel drive, 5-passenger sedan, 4-door galvanized body. Base price: $29,900*

ENGINE: 2.8-liter SOHC V-6, iron block, aluminum heads, 172-hp. Multi-path induction system.

DRIVETRAIN: 4-speed automatic or 5-speed manual transmission.

STEERING: Rack-and-pinion, power-assisted, vehicle speed-sensitive.

BRAKES: ABS, power vented front discs, rear discs.

PERFORMANCE: 0-60 mph in 8.8 sec / Top track speed 130 mph (manual version) 26 mpg Highway, 19 mpg City.†

MAJOR STANDARD EQUIPMENT: Driver's side airbag, automatic tensioning front seatbelts, power steering, windows, seats, and locks, A/C, cruise control, tilt and telescopic steering, two-way power sunroof.

SOUND SYSTEM: 8-speaker AM/FM stereo radio/cassette w/anti-theft features.

**Price based on MSRP with manual trans., excluding taxes, license, freight, dealer charges and options. Equipment levels vary. Prices subject to change. †1992 EPA estimates.*

For the Auto Motor Und Sport test results, call 1-800-FOR-AUDI.

CHASING YIELDS COULD LEAD TO NASTY ACCIDENTS

For individuals, the days of high returns at low risk are gone

FINANCING THE 90s

The combination of stubborn recession and fallout from the excesses of the 1980s is putting millions of Americans through the financial wringer. True, the stock market is near its all-time high. But home values are falling. Some insurance companies are defaulting on annuities. High-yield bonds have turned into outright junk. So just when safe products such as certificates of deposit seem to make the most sense, their yields are tumbling. And the decline in rates is not temporary.

In the 1990s, overall yields will be substantially lower than in the 1980s, and for investors to get higher returns, they'll have to take much higher risks. As recently as 16 months ago, short-term certificates of deposit yielded close to 8%. Today, that same six-month CD is paying about 5%. "People have been spoiled by the high returns that have been available on short-term debt instruments," says Michael Metz, chief investment strategist with Oppenheimer & Co.

LEVERAGE HURTS. People have also been spoiled by the seemingly uninterrupted appreciation in real estate values. But now the payoff from buying a home is no longer assured. "For the first time in many people's lives, they've been burned by real assets," says Stephen B. Timbers, chief investment officer with Kemper Financial Services. The idea "that leverage can hurt you, that real estate isn't a sure thing, will be emblazoned on people's minds for a long time." "Those days of open-ended asset appreciation are over," agrees Stephen S. Roach, senior economist with Morgan Stanley & Co. The '90s, he says, will see a shift of assets away from real estate and other tangible investments into financial assets.

And in shifting to financial assets, the decline in rates is pushing investors toward longer-term securities. A year ago, the 30-year Treasury bond yielded only 1.5 percentage points more than the three-month Treasury bill. Today, the gap has widened to a more lucrative 3 points. "People are under tremendous pressure to lengthen the maturity of their portfolios," says Timbers.

To get a sense of just how much pressure exists, look at the money pouring into higher-yielding—and riskier—bond mutual funds. This year, as of August, almost $40 billion of new money has flowed into bond funds, compared with $6 billion for the same period in 1990, according to the Investment Company Institute. An increasing amount is coming out of banks, where competition for CD investors and passbook savings accounts has dried up, along with attractive lending opportunities. As long as inflation is low and the economy sluggish, the inflows into individual bonds and bond funds are likely to continue. But investors have to expect volatility. On Oct. 2, talk of a tax cut, which could add to inflation, sent the price of the 30-year Treasury bond down about $13.75 per $1,000. If that talk becomes a reality, bonds could tumble a lot further.

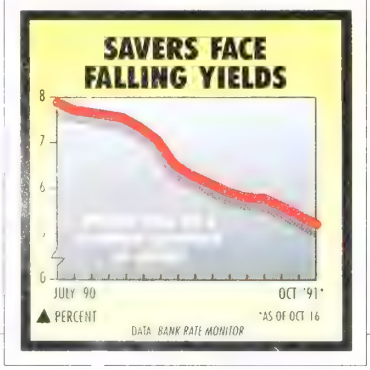
RISK APPRECIATION. In the quest for higher yields, individuals may be taking on risks they don't fully understand. Funds that invest in mortgage-backed securities issued by government agencies such as the Government National Mortgage Assn. have attracted many investors with their 8% yields and minimal credit risk. But there is a major drawback to such "Ginnie Mae" funds. As interest rates fall, holders of mortgages are more apt to prepay, or refinance, mortgages. That returns money early to the fund, which reinvests it at lower rates, lessening the fund's stated yield. If frustrated shareholders yank their money, the loss of principal could be substantial as the share price of the fund drops.

More innovative products are being rolled out to meet investor demand. One of the newest is the adjustable-rate mortgage (ARM) fund, which buys mortgages with rates that are reset periodically rather than being fixed for the life of the mortgage. If interest rates plummet, more flexible ARMs won't lose as much value as mortgages with fixed rates. But investment advisers have a basic concern. Since homeowners are more likely to be locking in fixed rates today, they wonder if an imbalance in the supply and demand for adjustable-rate securities will develop. If supply shrinks as demand grows, the underlying securities could become more expensive and pull down yield.

Even the stock market is attracting CD money. Conservative stock mutual funds have been one beneficiary, but some investors are buying stock directly. Overall, equities are yielding only about 3% in dividends, but investors are waking up to the idea of total return—which includes capital appreciation.

There's nothing inherently wrong with reaching for higher returns. But as people chase yield, they have to understand that the accompanying risks could trip them up.

By Suzanne Woolley in New York



IS AMERICA'S WORK FORCE BANKRUPT?

Many business leaders believe the answer to that question is a frightening "Yes." They perceive an absence of commitment, a lack of maturity, and the inability to absorb training to be an alarming trend in much of today's youth.

But perception isn't necessarily reality. Consider the people who have served in the Army.

The Army enlists quality people.

The Army believes America's youth belong in school. Our recruiters are strong advocates for good study habits and high school completion. We believe it pays off.

Over 98 percent of new recruits are high school graduates. Over two thirds score above average on the Armed Forces Qualification Test, a standardized aptitude test.

These smart new soldiers then become students in the nation's largest technical training organization. With 18 major technical training complexes, the Army trains young adults in over 300 specialities, many that involve high-tech equipment and state-of-the-art technology. It is a system that graduates over 100,000 men and women each year.

Transferrable skills.

Researchers at Ohio State University found that 50 percent of the people recently separated from the Army had transferred the occupational skills acquired in the military to their civilian employment. This was slightly better than the rate of skill transfer by graduates of business schools and vocational/technical colleges. But beyond occupational skills, soldiers acquire other lifelong qualities.

As a matter of fact, a survey of hundreds of employers, many from Fortune 500 companies, clearly shows that they value the attributes soldiers develop in the Army and will hire young people who are reliable, disciplined and have responsible attitudes toward work.

How the Army Career and Alumni Program helps America.

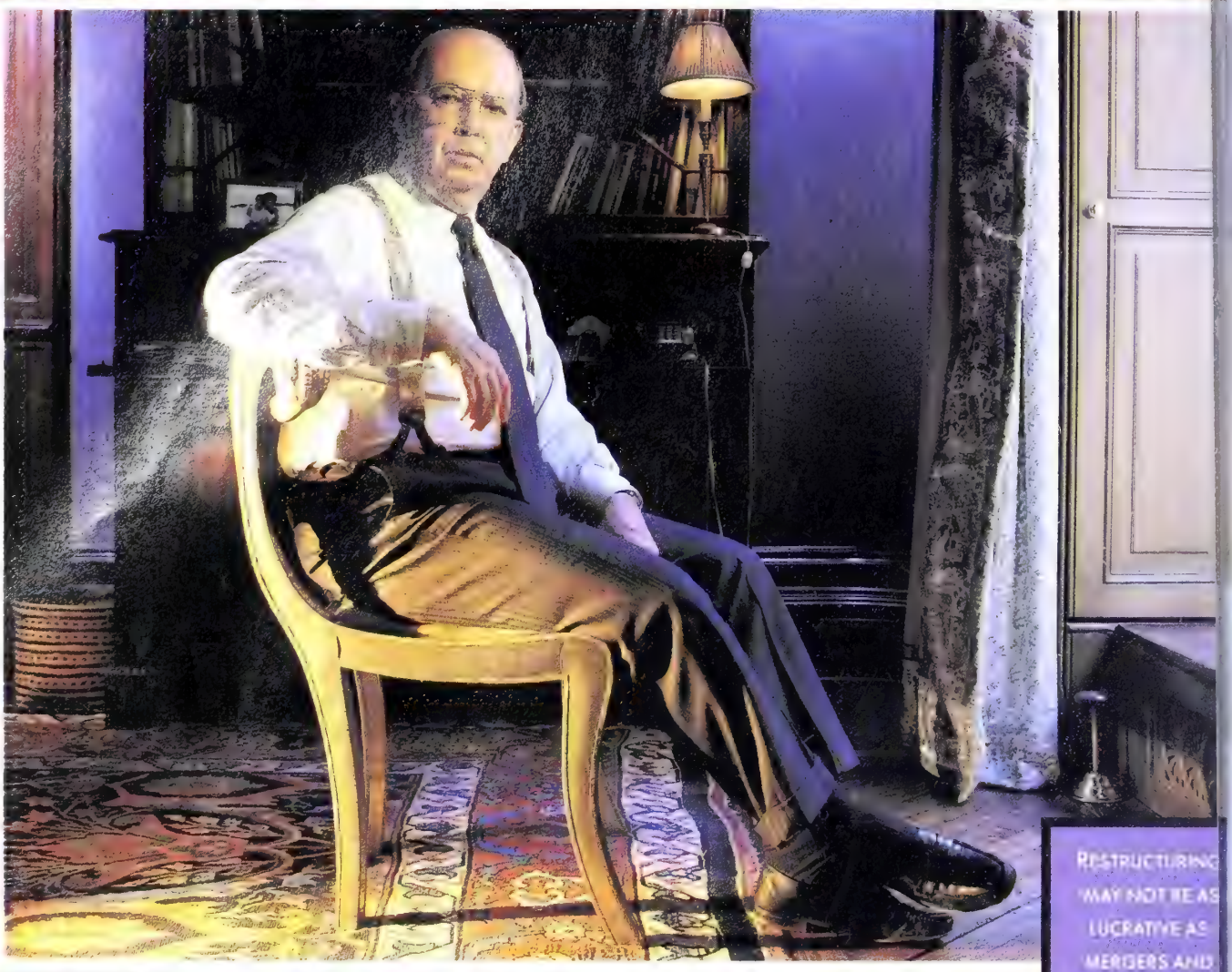
This year about 150,000 men and women will leave the Army. As they return to civilian life, they bring with them self-discipline, motivation, and technical skills America's work force needs. To help them get a head start on their civilian careers, the Army established the Army Career and Alumni Program (ACAP).

At ACAP Centers around the world, the Army provides training in job search skills for soldiers and their families. Besides facilitating their entry into the civilian world, the ACAP program prepares soldiers to make immediate contributions in their new civilian jobs.

How ACAP can help your business.

While ACAP serves the needs of the soldier, it's also a resource for employers across America. Interested employers may enter their firms into the Army Employer Network Data Base and find out more about ACAP by calling 1-800-445-2049.

It makes sense to support Army recruiting and Army Alumni. The Army will continue to recruit and train high-quality young men and women because they are the key to maintaining America's defense. And the Army will continue to return to the civilian sector capable, mature, highly-motivated young people, ready to Be All They Can Be as part of America's work force.



THERE'S PLENTY FOR ALL AT THE BANKRUPTCY BANQUET

Workout pros are making a fortune off corporate misfortunes

FINANCING THE 90s

Rhett Butler an oracle for the '90s? Probably not. But *Gone With the Wind*'s rakish Civil War profiteer, who made a fortune even as the South was losing, offered some oddly prophetic advice. "Most people don't realize," he tells Scarlett O'Hara, "there's just as much money to be made when a society's falling down as when it's rising up."

Quicker than you can say Chapter 11, Rhett Butler's creed has become a rallying cry for a growing segment of Wall Street. Restructuring, once a finance-industry backwater, has become a veritable gold mine. Charging fees of $500 an hour or more, legions of lawyers, investment bankers, and accountants are taking in millions to undo the damage of the '80s. "It has become our own cottage industry," says Wilbur L. Ross Jr., a restructuring pioneer whose Rothschild Inc. workout group was launched in 1985. "It may not be as lucrative as mergers and acquisitions, but there is still plenty of money to be made."

Indeed. The 26 firms involved in the Eastern Air Lines Inc. bankruptcy in 1989 charged close to $86 million in fees. Former Wickes Cos. Chairman Sanford C. Sigoloff stands to make at least $12 million for his work on liquidating retailer L. J. Hooker Corp., while Ross's firm earned $2.5 million for representing just the creditors in the bankruptcy of Donald Trump's Trump Taj Mahal. And the biggest reward may still be ahead: The dozens of firms working to dismantle one-time Wall Street powerhouse Drexel Burnham Lambert Inc. received $77 million in fees through May—and are still charging $5 million a month.

HIRING A HALL. The sheer complexity of bankruptcy proceedings and the desire of creditors to protect their interests account for the surging industry. "It seems that every investor, every creditor, no matter how big or small, comes to the table with his own lawyer or financial adviser," says Christopher Beard, publisher of Washington-based

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Closing Date: October 21, 1991 / Issue Date: December 2, 1991

BusinessWeek

* Source: 1990 SMRB

newsletter *Turnarounds & Workouts.*

Consider Tucson Electric Power Co. When the Arizona utility announced an interest-payment moratorium earlier this year, it rented a hotel ballroom to fit the nearly 200 creditors and their seconds who showed up. With myriad debt, sale leasebacks, and other financing mechanisms to deal with, 10 law firms, a dozen investment advisers, and two accounting firms are now billing time.

With so many companies on the ropes, restructuring crews can play crucial roles. Los Angeles-based Jeffrey Chanin, a lawyer and former Drexel investment banker, draws $200,000 a month for guiding Carter Hawley Hale Stores Inc. through Chapter 11. This summer, he helped earn his keep by coming up with a novel plan to persuade bondholders to sell $431 million in bonds to Chicago financier Sam Zell. Consolidating creditor claims and bonds, estimates Chanin, will save six months in bankruptcy court and $18 million. For his efforts, he will claim a bonus of up to $1 million when the retailer emerges from bankruptcy.

DEJA VU. Similarly, Rothschild's Ross helped earn his $150,000 monthly retainer by negotiating an attractive deal for Orion Picture Corp.'s bondholders. In August, he helped pressure majority shareholder John W. Kluge to add $50 million in capital before the bondholders would agree to swap their paper for stock and zero coupons.

Ironically, in many cases, newcomers to the workout industry are the same folks who raised money or struck deals for companies that now are going sour. New York's Skadden, Arps, Slate, Meagher & Flom, a top mergers-and-acquisitions law firm in the '80s, created a 75-lawyer restructuring unit last year by reassigning some tax and other corporate attorneys from their M&A duties.

Then there's the Drexel connection. Nearly two dozen members of Drexel's high-yield unit have landed elsewhere on Wall Street and now are doing restructuring at Kidder Peabody, Smith Barney, Alex. Brown & Sons, and Jefferies & Co. Leon Black, a former Drexel executive, now runs Lion Advisors, which is counseling France's Altus Finance on its proposed $3 billion purchase of ailing Executive Life Insurance Co.'s junk-bond portfolio. "Sometimes, it's just a matter of turning the same company and looking at it from another angle," says Kenneth D. Moelis, a managing director at Donaldson, Lufkin & Jenrette Securities Corp. who arrived with seven former Drexel colleagues in early 1990.

Workout advisers are among the first to acknowledge that it's far more difficult these days to strike a deal between management and creditors. Not only is everyone more litigious, but creditors are no longer so fearful of Chapter 11. "We have arrived at the age of the militant investor," says Sigoloff. This spring, Los Angeles lawyer Stephen Chrystie, representing a group of vendors, forced MGM Pathe Communications Co. into involuntary bankruptcy. The move prompted a management overhaul that also freed $16 million for his clients. Chrystie's take was roughly 10%.

'WE HAVE ARRIVED AT THE AGE OF THE MILITANT INVESTOR'
SANFORD C. SIGOLOFF
FORMER WICKES COS. CHAIRMAN

Whether the workout profession will continue to attract as many new players is questionable. Wary that advisers will gouge hapless companies, bankruptcy courts increasingly are forcing firms to scale back or rebate fees. A Dallas bankruptcy judge rejected more than $400,000 in fees that Bear, Stearns & Co. had billed Southmark Corp., while a Miami judge overseeing the General Development Corp. bankruptcy rolled back the fees of 11 firms by $1.5 million.

What's more, with clients often cash poor, getting paid can be a problem, as Los Angeles-based Stutman, Treister & Glatt knows. Considered one of the leading bankruptcy boutiques, the law firm still is waiting for a judge to allow half the $7.5 million it charged for more than 15,000 hours of work during the two-year-long bankruptcy proceeding for Public Service Co. of New Hampshire.

'COUNTERCYCLICAL.' Likewise, Donaldson, Lufkin & Jenrette took $4 million in stock instead of cash for Saatchi & Saatchi Advertising International's restructuring earlier this year and $2 million in notes for Orion's debt-swap offering. "Often, you can't charge as much as you might if the company was going well," admits Donald S. Bernstein, the lead bankruptcy partner for New York law firm Davis Polk & Wardwell. But, he adds, "it is still a good countercyclical business."

Even when the cycle changes and companies rebound, some cleanup firms will continue to profit. Anticipating that certain companies will emerge from bankruptcy in better shape than ever, some workout specialists want an even bigger piece of the action. Sigoloff, whose firm is working on four restructuring deals now, says he's eager to trade his firm's "sweat equity" for pieces of the companies he counsels. The idea is simple: What goes around comes around. Rhett Butler would understand.

By Ronald Grover and Kathleen Kerwin in Los Angeles, with Lisa Driscoll in New Haven

THE COST OF A CLEAN SLATE

Company	Fees* Millions of dollars
LTV	$120
FEDERATED DEPARTMENT STORES	90
EASTERN AIR LINES	86
DREXEL BURNHAM LAMBERT	77
L.J. HOOKER	45

*Estimated fees for legal, accounting, and investment banking paid by companies since declaring bankruptcy
DATA BW

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THE DAY OF THE REGULATOR DAWNS—BUT FOR HOW LONG?

Pressure to stimulate lending will lead to conflict in Congress

FINANCING THE 90s

The 1980s, in many ways, was almost as much a regulatory debacle as a financial one. Regulators were not the main cause of the collapse of hundreds of savings and loans, banks, insurance companies, and brokerage houses. But few observers would dispute that regulators often were lax in supervising these institutions, slow in spotting problems, and ineffectual in trying to get them to take remedial actions. Regulators also were asleep at the switch in spotting wrongdoing, which was graphically demonstrated by the Bank of Credit & Commerce International fraud and the Salomon Brothers Treasury manipulation scandal.

Regulators now are moving aggressively to mend their ways. In abject testimony before Congress, regulators have been admitting misjudgments, promising vigorous enforcement of existing regulations, and proposing new rules. Bank regulators in the field have sharply tightened their oversight.

It's tempting, but still premature, to label the '90s as a decade of regulatory rigor, for there are as many regulatory doves as hawks in Washington these days. Dovish Bush Administration officials are at odds with hawkish congressional leaders and regulators over the crackdown on banks. With an eye toward next year's election, officials want regulators to ease up in the hope that banks will lend more to help the sluggish economy.

All of this has helped produce a raging debate in Washington over the tone and direction of regulation of financial institutions in the years ahead. Adding confusion to the rancor are the Administration's mixed signals, with some officials encouraging forbearance and others promoting discipline. The resolution of the debate will demonstrate whether we have learned from the abuses of the '80s. More important, it will go a long way toward determining whether financial institutions prosper or languish during the '90s.

MERGER FRENZY. The moves toward a stricter approach are most apparent in banking, which remains beset by billions in bad loans. The Federal Reserve, for instance, vows to enforce stiff capital requirements on the institutions it regulates. Banks that want to participate in new businesses or the current merger frenzy will have to toe the capital line to get a green light from the Fed.

And despite squawking from some banks—and some senior Administration officials—the U. S. Office of the Comptroller of the Currency doesn't seem inclined to back off its strict handling of questionable bank loans. The Bush Administration has signaled its approval for the tough line by putting Fed official William Taylor in charge of the Federal Deposit Insurance Corp. and by renominating hard-liner Robert L. Clarke to another term as Comptroller.

There also is increasing talk of a new wave of regulation in other sectors. Growing concern about the solvency of the insurance industry is behind a move on Capitol Hill to federalize insurance regulation. "If we have one more important insurance company failure, the pressure will be on Congress to do something," says Georgia State University business Professor Harold Skipper.

There's a suggestion that Congress might adopt a model state insurance code that would set minimum capital requirements and limit the kinds of investments insurers could make. Among other ideas under discussion: creating a self-regulatory organization similar to the National Association of Securities Dealers, which polices Wall Street; making insurance fraud a federal crime; and repealing the industry's historic exemption from federal antitrust laws.

The Securities & Exchange Commission's ambitious chairman, Richard C. Breeden, wants more power over the government securities market so that the SEC can more effectively deal with abuses uncovered by the Salomon Broth-

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ers Inc. scandal. Currently, the SEC's authority extends only to prosecuting fraud. Under a bill proposed by Representative Edward J. Markey (D-Mass.), Wall Street dealers would be required to report large trades in government bonds to the SEC. The dealers also would have to implement adequate internal systems to comply with the law.

CLOUT. It's not certain, though, how long all of this tough regulatory talk will endure. Some policymakers are advancing the argument that expensive new regulatory burdens could quash innovation and put U. S. companies at a competitive disadvantage as capital markets become more global. The SEC, for instance, is under pressure to ease reporting requirements for publicly held companies and investment houses in order to preserve U. S. preeminence in stock trading. If the economy continues to sputter, regulatory doves will have even more clout in forcing hard-line regulators to back down.

Similarly, the Administration would fight any regulatory intrusions in the government securities market that might boost the cost of financing Washington's budget deficit. Says one senior Fed official: "We need to look for efficient ways to zero in on abuses without a heavy layer of regulations."

Already there are signs that some parts of the Administration are backing off from its stiff stance on bank regulation. The most telling examples are the Administration's proposal to overhaul Depression-era banking laws and its Oct. 8 package of measures to combat an alleged credit crunch. Both seem eerily reminiscent of Washington's handling of the savings-and-loan industry. A decade ago, Congress permitted S&Ls to seek profits in risky new ventures—moves that often led to their undoing. Now, many lawmakers support the Administration proposal to give banks greater powers to sell stocks, bonds, and insurance. The legislation, though, is likely to be scaled back because of opposition from some Democrats who fear a repeat of the '80s.

The Treasury Dept.'s credit-crunch proposals stand a better chance of becoming policy. On the surface, the blueprint to encourage more bank lending and give the economy a jump start seems technical and innocuous. Among other things, it would encourage banks to make new loans—and roll over existing loans—to real estate developers, cable-TV franchises, and other highly leveraged borrowers. But critics worry that this could set the stage for another wave of troubled loans. To one Wall Street analyst, the plan appears aimed at "getting the marginal lender to lend to a marginal borrower." Robert B. Reich, a public policy lecturer at Harvard University, worries that the Administration is sending "a message that the government is not really serious about reforming the financial markets."

The proposals also would allow bankers to appeal confidentially what they consider onerous reviews by field examiners to regional higher-ups. For some banks, that would mean the president of the local Federal Reserve Bank, who is appointed by bankers from within the region. Critics fret that bankers may now feel freer to use their political pull to tone down bad reports—much as former thrift executive Charles H. Keating Jr. did to forestall a regulatory attack on his Lincoln Savings & Loan Assn. Treasury's proposals could sow the seeds for "more bank scandals, taxpayer bailouts and general chaos in the banking industry," worries Representative Frank Annunzio (D-Ill.), chairman of a key House banking subcommittee.

Some bankers had no qualms about going over examiners' heads even before these proposals were announced. In a move one ex-regulator deemed "extraordinarily unusual," top officials at the Comptroller's office in August overruled examiners who had told Wells Fargo & Co. to write off an $85 million high-risk loan to Revco D. S. Inc. The examiners' reasoning: The Ohio-based drugstore chain has been mired in bankruptcy since 1988, two years after a leveraged buyout.

But Wells Fargo CEO Carl E. Reichardt flew to Washington to argue—successfully—that with Revco's junk bonds still trading at roughly 50¢ on the dollar, the bank shouldn't have to write off the entire debt, particularly since the chain had not missed an interest payment. Whatever the merits of the dispute, Wall Street analysts worry that the episode sends a troubling signal to examiners: Ease up, or else. That's especially true given that Wells Fargo, whose portfolio of highly leveraged loans totals $3.5 billion, hasn't written off anywhere near the share of such loans other banks have.

In sum, financial regulators in the '90s will have to walk a fine line: They must be sensitive to the need to bolster a struggling economy and maintain U. S. competitiveness. But they also must be strict enough to prevent another round of '80s-style abuses. The $500 billion S&L bailout is a grim reminder of what can happen if regulators can't strike a balance. "The last thing anyone like me wants after 2½ years of the S&L debacle is to get on the wrong side of forbearance river," says Treasury Deputy Secretary John E. Robson. "There's no profit in that." A $500 billion hit can wipe out a lot of economic growth.

By Dean Foust in Washington

THE GREAT TUG-OF-WAR

TOUGHER REGULATION IN SOME AREAS...

- Bank regulators have raised capital requirements and forced huge write-downs of problem loans. Critics claim that could impede the recovery
- Congress is mulling federal insurance regulation. Lawmakers are considering a model state insurance code setting minimum capital requirements and limiting investment options
- The SEC wants broader authority over the government debt market. Now, it can only bring fraud cases

...HAS BEEN MATCHED BY LOOSER PROPOSALS ELSEWHERE

- The Bush Administration is pressing Congress to repeal limits on the ability of banks to sell stocks, bonds, and insurance. Opponents argue that similar deregulation helped create the thrift industry disaster
- The Administration wants more leniency by bank examiners on loans to real-estate and other highly leveraged borrowers. Some analysts say this could encourage riskier loans
- The SEC may exempt foreign companies that issue stock here from some reporting requirements. The agency has already reduced disclosure for securities offered solely to institutional investors. And it has relaxed reporting rules for stock trading outside normal exchange hours. Critics claim these moves could hurt investors

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BY GENE G. MARCIAL

A TAKEOVER MAVEN SEES GOLD IN GOLDEN BOOKS

In the 1980s, investment manager Lewis Rabinowitz scored heavily by taking large stakes in potential takeover targets. But with the 1990s' dearth of deals, Rabinowitz, whose R. Lewis Securities manages about $100 million in investments, needs a compelling reason other than a possible buyout to invest. His latest quarry is Western Publishing Group, familiar to parents and children for decades through the company's Golden Books. The stock, which trades over the counter at 12, is up from 9 just a month ago but is still a "golden" opportunity, according to Rabinowitz.

The nation's largest publisher of children's storybooks also produces related games and videos. Western has several other businesses, too, but Golden and related products accounted for 75% of its fiscal 1991 sales of $493 million and almost all of its $7.5 million in earnings. Besides a great franchise, Western has a debt-free balance sheet.

SUITOR. The past few years haven't been easy. Sales of Western's once-popular Pictionary game dried up, which helped drive earnings down 66%, to 36¢ a share in the fiscal year ended Jan. 31, 1991, but profits are now on the mend. The company has streamlined its distribution and become more aggressive in marketing. Some pros also speculate that Western's poorly performing Advertising Specialties division—which makes customized shirts and writing instruments—might be up for sale.

Rabinowitz estimates that Western will earn 75¢ to 80¢ a share in the fiscal year ending January, 1992, and $1.45 to $1.55 in fiscal 1993. Based on that earnings turnaround, he figures the stock could double in the next 12 months.

And that's not all. Rabinowitz thinks that Western—which had considered selling out to Paramount Communications in 1988 for $26 to $28 a share—could once again attract a suitor. And he's not the only one. Money manager Mario Gabelli recently boosted his company's stake to 29% from 27%.

A New York investor who holds a 3% stake thinks Western CEO Richard Bernstein faces "tremendous pressure to drive the company back to profitability and prod the stock to its old high in the upper 20s—or somebody will try to do it for him through a buyout." Bernstein owns 20% of the stock.

Western watchers speculate that Paramount may be interested again. But the talk focuses on Walt Disney Co. Whispers are that Disney, which has a five-year licensing agreement for Western to publish books using Disney characters, will need very little prodding to make a friendly takeover bid. Bernstein insists he hasn't solicited any suitors. Disney declined comment.

RABINOWITZ: BEING DEBT-FREE HELPS

BRAND-NAME SKIN AND BONE MARROW

With biotech stocks chalking up mighty gains, many fear that the red-hot industry may have peaked. Not so, says money manager Elizabeth Dater, who sees a number of "compelling" values among the industry's undiscovered companies. Dater, a managing director at E. M. Warburg, Pincus, is accumulating Marrow-Tech shares for her $38 million Counsellors Emerging Growth Fund.

At 13¾, Marrow-Tech has already doubled in the past two months. No matter, says Pincus: Marrow-Tech is an "attractive long-term holding for much larger gains in the next two to three years."

Marrow-Tech has patented its technology for culture replication of human tissues, including skin, bone marrow, and cells of certain organs. Dater says this technology has potentially broad medical and industrial uses, such as screening for toxicity of household, cosmetics, and pharmaceutical products without using animals or humans. In September, the company signed an agreement giving the Belgian unit of Johnson & Johnson exclusive European marketing rights for its Skin2 toxicity-screening kits.

Marrow-Tech also plans to use its technology for skin replacement in burn victims and others suffering from skin diseases. "The market for skin replacement in burn victims is huge," says Dater, who figures the company will be profitable by 1994. She expects Marrow-Tech to do other joint ventures, which will likely culminate in some pharmaceutical giants taking sizable equity stakes in Marrow-Tech.

AU BON PAIN: STALE! FRESH! STALE! FRESH!

For a company that went public only four months ago, Au Bon Pain has already attracted a crowd that most companies try to avoid: short-sellers. The short interest in the stock has jumped to nearly 800,000 shares from just 61,500 a month ago. Why? The shorts think this fast-growing Boston-based chain of urban cafés will stumble. But Au Bon Pain's fans aren't daunted, and, to the shorts' dismay, the stock, initially offered at 9, has risen to 13.

Tom Frank, senior portfolio manager and research director at Dreyfus, the giant mutual-fund manager, thinks Au Bon Pain is an appetizing investment. The chain specializes in fresh-baked French bakery items, such as baguettes, croissants, and muffins, plus sandwiches, salads, and soup.

Never mind that the stock, based on four quarters of profits, trades at a heady price-earnings ratio of 41, says Frank. True, other restaurant chains have much lower multiples: 15 for McDonald's and 19 for Wendy's International. "But Au Bon Pain has found the right concept in urban restaurants," says Frank. He's impressed by its management, which is setting up clusters of the self-service cafés in New York, Philadelphia, and Boston.

Frank also notes that the company has had fast growth despite the recession. And he expects an even sharper breakout in sales and earnings next year, when he sees profits leaping to 51¢ a share on sales of $87 million, vs. an estimated 35¢ on sales of $68 million for 1991 and 1990's net of 30¢ on $57 million in sales. Frank says big Midwestern cities, such as Chicago, will be Au Bon Pain's next area of expansion.

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COMPUTERS

CAN ROD CANION STOP COMPAQ'S EROSION?

He takes a $70 million loss—and gets serious about cost-cutting

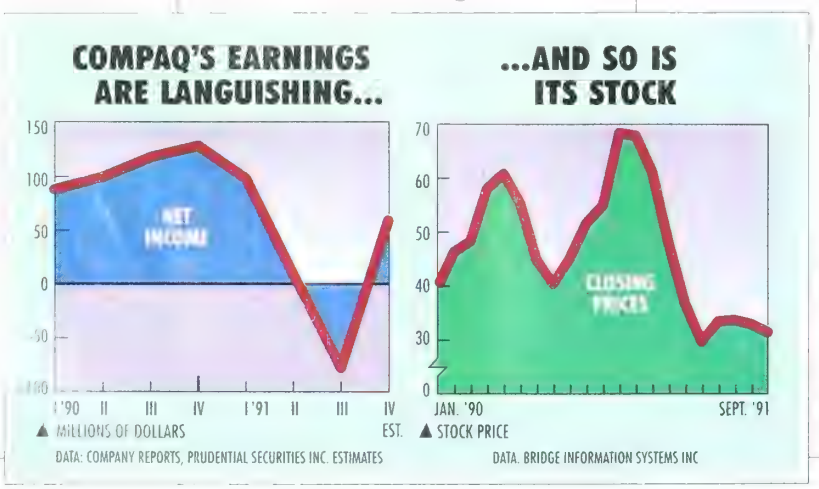
It has been a painful year for Compaq Computer Corp.'s Rod Canion. Battered by competition from the IBM PC clones that it always disparaged, the company that once set growth records for U.S. industry stopped growing. For the year, Compaq will show a 10% to 15% drop in revenues, to about $3.1 billion, analysts figure. On Oct. 23 came the biggest blow: A $70 million loss and plans for the company's first-ever layoffs, 12% of its 12,000 workers.

That kind of wrenching change has become commonplace in the computer industry, but CEO Canion, 46, had hoped Compaq could be spared. Now that it's happening, he's focusing on the future. From his office at the company's sprawling, tree-lined Houston headquarters complex, he talks breathlessly about the sweeping changes he's implementing. His executives are working on a new distribution strategy, new customer-support programs, and aggressive new pricing. And Canion is engineering a massive internal reorganization. The goal is to put Compaq back where it has been for most of its eight-year history—several lengths ahead of other makers of IBM-compatible PCs. "We didn't take them seriously enough before," Canion says. "Now we are."

'NEW DESIGN.' Indeed, Canion now concedes that while Compaq was plying its tried-and-true formula—selling premium-priced PCs through a faithful network of dealers—the market was changing. Not only were PC clonemakers becoming more technically adroit, but they were using new channels, including direct marketing, mass merchandisers, and computer superstores. On top of that, sluggish economies in the U.S. and Europe slowed buying by the corporations that Compaq relies on most.

Part of the comeback plan—expanding distribution and cutting prices—began last spring. But the boldest move is the reorganization. On Oct. 23, Canion split the company into two semi-autonomous units: one to develop and market high-end systems such as network servers, another to handle mainstream PCs.

"We're effecting more change in 1991 than in any year in our history," says Chairman



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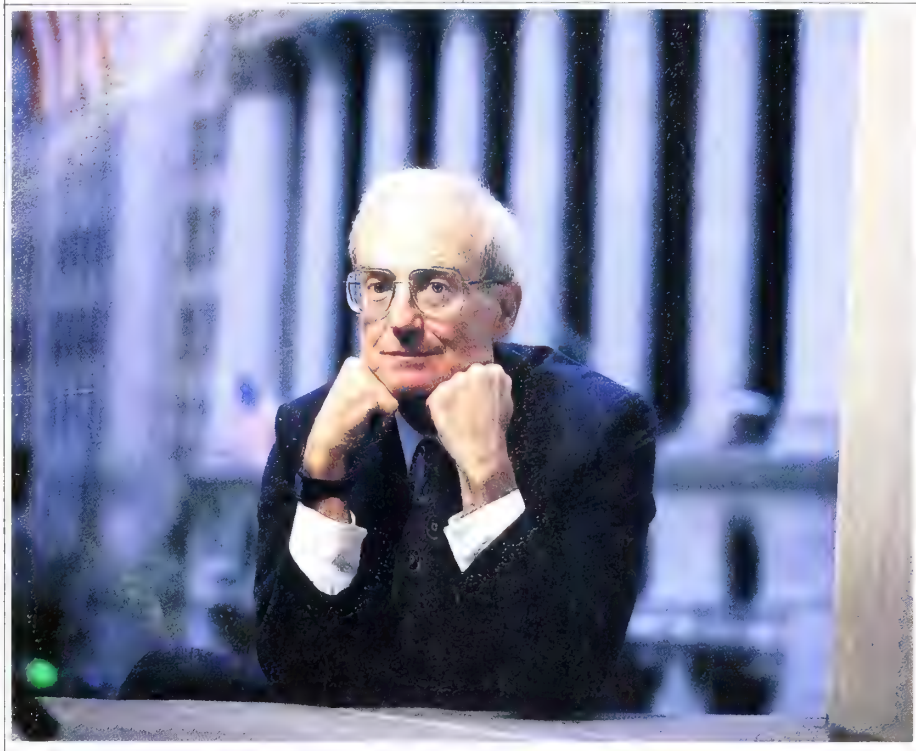
Benjamin M. Rosen. "It will all pay off next year." Lately, Rosen has been putting in more time in Houston, helping with strategic planning. A onetime securities analyst, he has also been trying to rekindle Wall Street's love affair with the stock (which went from $11 at its IPO, split, then peaked at $74). But it has been a hard sell. It didn't help that Canion sold $9.8 million in stock last February at about $70, before the shares plunged 60%. But analysts responded favorably to the Oct. 23 announcement. "Now, they can accept lower margins on PCs and compete on price—run lean and mean," says Prudential Securities Inc. analyst Rick Martin.



CHAIRMAN ROSEN: "WE'RE EFFECTING MORE CHANGE IN 1991 THAN ANY YEAR IN OUR HISTORY"

Until now, Compaq has been heavily centralized, with units for marketing, development, and such. Decision-making has been by consensus-building, a slow process in the current market. Canion figures smaller, separate units with their own staffs of engineers and marketers stand a better chance against rivals. "We need a new design," he says, "so people can view these businesses on their own merits." Each business will have its own cost structure, so the price of a low-end PC won't have to help fund research for more expensive machines.

SHRINKING SALES. Canion had better hope that all this works—and fast. Compaq sales dropped 17% in its quarter ended Sept. 30, to $709 million. And earnings, before the $135 million restructuring charge, were just $27 million, vs. last year's $124 million. For the year, net profits will be $130 million to $150 million, down from $455 million in 1990, figures Prudential's Martin.

There is no mystery behind Compaq's profit problems. With demand flagging, PC makers have been slashing prices. Compaq was slow to catch on, but it eventually lopped as much as 34% off its price tags. Even so, some customers and dealers say it was too little, too late. Martin Marietta Information Systems in Chantilly, Va., has 2,000 Compaq PCs. But it's buying 1,000 NEC Corp. PCs: At $1,500 each, they're 20% to 25% cheaper than similar Compaqs, even after price cuts, says Steven D. Birgfield, Martin Marietta's manager of computing standards. "Compaq narrowed the gap," he says, "but it wasn't enough."

Some dealers say that price cuts have revived demand. Micro-Center in Akron, for instance, says notebook sales have jumped 15% to 20%. Still, Compaq has lost market share. In the first eight months of 1991, the company supplied 28.5% of all PCs sold through U. S. dealers, down 2 points from a year earlier, says Computer Intelligence/Storeboard.

All year, Canion has resisted pressure to slash overhead. Indeed, Compaq's costs continued to rise. In the second quarter, sales and marketing expenses were $105.9 million, up from $101.7 million a year earlier, in spite of a 17% revenue falloff. In the third quarter, the company trimmed operating expenses to 30.4% of sales from 32% in the second quarter. But that compares with 22.5% at AST Research Inc. "Compaq is running a very expensive organization," says Safi U. Qureshey, president of AST. One example: Compaq just stopped paying boarding fees for the pets of traveling executives. Other perks will disappear, too, as will up to 40% of top management's compensation, says Canion, who was paid $2.3 million in 1990.

But Canion's cuts aren't so deep that the fundamental nature of the company will change. Compaq's fate, he reckons, still depends on its technological edge. And that means a hefty research and development budget—more than 7% of sales, vs. less than 3.8% at AST. Its most ambitious effort is a new line of workstations due in 1992 that are based on reduced instruction-set computing (RISC) technology. To get into RISC, Compaq bought a 13% stake in workstation maker Silicon Graphics Inc. and earmarked $50 million for joint development.

This fall brought a rush of new PCs, starting with "modular" desktop computers that can be upgraded with new processors and peripherals. In early October came a color portable based on Intel Corp.'s speedy 80486 microchip. Then came a slimmed-down Systempro, its minicomputer-like file server for networks. The original Systempro, using multiple microprocessors, fell short of the company's expectations, partly because there was little software for it.

HEAVY PORTABLE. The new lineup may not make much difference, however. Upgradable PCs, for instance, aren't new. And starting at $3,099, Compaq's are about $900 more than those from rival AST, says Matthew Fitzsimmons, owner of ComputerLand of White Plains, N. Y. Compaq's design makes upgrading easy, but many customers question the concept. "The direction is toward cheaper, smaller machines," says Donald W. Matto, manager of technical services at Chevron Corp. "Within three years, I should be able to buy a new 486 as cheaply as I can upgrade."

The color portable, the machine that Compaq cites as evidence that its technical prowess is intact, may be the biggest question mark. It's among the first portables to use the 486, but it won't run on batteries, weighs 18 pounds, and is priced at $10,000—when competitors are showing battery-powered color notebook PCs listing for half that. "I heard Compaq introduced an 18-pound portable and I want to know who buys it because maybe I can sell them some of our Mac portables," says Apple Computer Inc. Chairman John Sculley, referring to his company's 18-pound "luggable," a flop.

On the marketing front, Compaq is still revising its distribution plans. Dealers such as ComputerLand Corp., wi

JEFFREY LOWE

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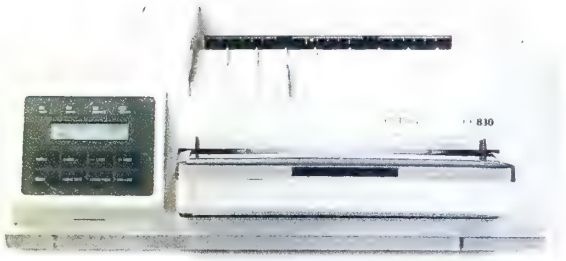

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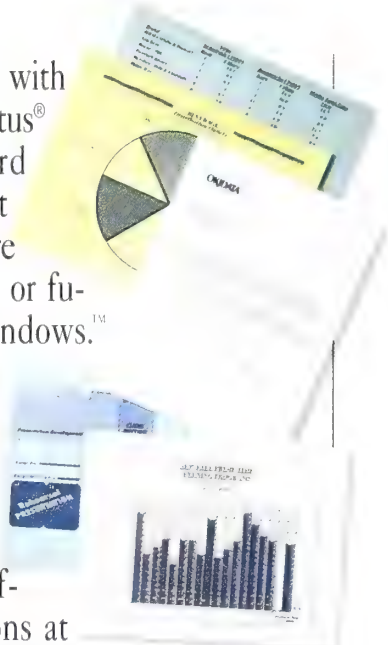

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still be the biggest channel, but it's adding other resellers, too. Its basic PCs are now available in 10 Biz-Mart Inc. and Tandy Corp. superstores, and the company says it will be in 100 such outlets by 1993. With its new systems division, Compaq will move more high-end sales to specialized consultants and away from dealers, who have had mixed results with SystemPro. In September, for example, Compaq signed Electronic Data Systems Corp. as a distributor.

Executing the new plan will fall largely to Eckhard Pfeiffer, a German who formerly headed Compaq's European operation. Last January, he was given the new job of chief operating officer with responsibility for worldwide operations. Reporting to him will be Gary Stimac, head of the systems division and H. Douglas Johns, who runs PC operations.

Canion figures that he has finally made the tough decisions that will get Compaq back on track. "With our new structure, we think we can get more aggressive and gain market share," he says. If he's wrong, 1992 could be another painful year.

By Mark Ivey in Houston, with bureau reports

AS IF THE U.S. WEREN'T TOUGH ENOUGH

Launching an American personal computer in Japan takes nerves of steel—especially when your existing business is already hitting a wall. In Japan, you're up against 19 domestic players, seven of them conglomerates with more than $20 billion in sales. They have an edge over foreign players in both distribution and brand awareness. And most make electronic components, so they get first crack at new technology.

You need to be a little crazy to face such a lineup. Nonetheless, after three years of studying the Japanese market, Compaq Computer Corp. last month set up a Tokyo subsidiary. The game plan: to sell high-end PC systems to large multinationals in Tokyo and steer clear of the cutthroat low-end market. It's a sensible approach, but as Baring Securities Ltd. analyst Michael Jeremy puts it: "Even if Compaq does everything right, it's going to be very tough."

The biggest headache will be distribution. Compaq's strongest suit these days is laptops, but more than half the laptops sold in Japan are marketed just like cameras and television sets—in crowded discount shops. Products sink or sail on the basis of price or the latest features—or both. Because of the advantage the Japanese have in designing components, Compaq can't touch local rivals in their ability to churn out new models.

TWIN ACES. To learn the ropes, Compaq handed control to Masaru Vic Murai, a 29-year veteran of IBM Japan. As local critics quickly pointed out, the new president's experience at Big Blue was in telecommunications and mainframes, not PCs. Sniffs a senior manager at a large Japanese rival: "Compaq should have appointed somebody who understood consumer electronics."

Not so, argues Murai, who says he won't rely heavily on the typical PC discount shop. "That's not the correct entry point for any foreign company," says Murai. "Going through business channels, we have advantages over every other manufacturer."

MURAI'S STRATEGY IN JAPAN WILL STRESS HIGH-END NETWORKS

What he has in mind are Compaq's twin aces: IBM compatibility and networking skills. As Japanese companies spread overseas, they need computers to communicate across continents. Many use IBM PCs in America or Europe, even though at home there isn't an industrywide PC standard. The closest thing is NEC Corp.'s PC line, with around 60% of the market.

So Murai hopes to hook large corporations on its fully IBM-compatible product line and help them move from mainframes to PC-based local-area networks, or LANs. He has enlisted giant trader Marubeni Corp. and such outlets as ComputerLand. Now, he's trying to sign more resellers. And since LANs are still new to Japan, says Murai, "we're getting in at the ground floor."

Maybe the second story, actually. Workstation leader Sun Microsystems Inc. and software supplier Ungermann-Bass, a Tandem Computers Inc. subsidiary, brought LANs to Japan in the late 1980s. Then, Novell Inc. arrived in March, 1990, and sold a 20% stake in its new Japan subsidiary to NEC, Fujitsu, Toshiba, and others. Now, the Ministry of International Trade & Industry is showing interest in the critical networking technology. Next year, MITI plans to set up a $27 million consortium with 100 private companies to develop LAN hardware and software products.

LITTLE BLUE. And while IBM compatibility is essential in the rest of the world, it means little in Japan. Even with plenty of Japanese-language software, IBM sold just 126,000 PCs in Japan last year, according to market researcher International Data Corp. That's one-eighth of what NEC sold. "How can Compaq make a dent with its idea of compatibility," asks Kenji Ishima, chief researcher at Yano Research Institute in Tokyo, "if Japanese don't buy IBM PCs?"

Murai doesn't have all the answers, but he does have a guarantee from headquarters not to interfere. It comes from Chief Operating Officer Eckhard Pfeiffer, who headed the thriving European subsidiary and knows the value of local autonomy. "If I fail, management may get rid of me," Murai jokes, "but Compaq is in Japan to stay." Indeed, with 16% annual growth, the $7 billion Japanese PC market is just too luscious to pass up.

By Neil Gross in Tokyo

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John Glenn
U.S. Senator; Muskingum College, OH

Steve Bell
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Major corporations have long offered their employees an array of company-paid insurance and retirement benefits. Indeed, while other societies have made government the major source of health insurance and pensions, in the US employers have been the principal providers of both. Now, however, most employers are not only changing the range of benefit choices they offer, but also changing the basic structure of their benefits.

The driving force of change is economics which is forcing employers to subject their benefits spending to rigorous examination. Upon assessment, most employers find that the traditional blanket approach to benefits — total coverage for everyone — is subjecting them to unneeded expense. As Anthony S. Martin, employee benefits consultant at Coopers & Lybrand points out, employers have realized that the US now has "a lot more varied workforce," and as a result, the one-size-fits-all approach to employee benefits doesn't work. Young workers are often less interested in building retirement benefits than older workers; those who have a working spouse covered by health insurance have different insurance needs than those who are sole breadwinners. Single parents and childless couples place very different priorities on child care benefits. Rather than attempt to fashion a single approach that suits all of these interests, many employers determine a sum they'll spend on each employee, establish a menu of benefits, and then let each employee choose the benefits he or she wants. Says Martin, "Employers are offering employees choices, and many of those choices are about risks."

The changes underway reflect more than demographic diversity, however. Martin cites a philosophical change taking place. The workplace is becoming less hierarchical. More and more, employers don't want to be paternalistic — they want employees to take more responsibility." As part of this, there is what Conference Board President Preston Townley calls a "new thrust toward employee self-management. The days of corporate paternalism are behind us."

Corporations have been forced to change their approach to benefits — forced by costs. Benefits are no longer the "fringe" of compensation; today they often add up to 20 to 40 percent of wages. And companies have found many of their traditional benefit promises are turning out to be surprisingly expensive. As a result of unending price increases in medical care, for example, health care expenses now consume a sum equal to 26 percent of corporate profits, according to a study by Foster Higgins & Co., a benefits consulting firm. Increasing longevity has made the promise of a pension more costly as well. And the combination of increased longevity and rising health care costs has led employers who promised to pay post-retirement health care benefits to wonder what they were thinking when they made such a pledge.

HEALTH INSURANCE: NO MORE BLANK CHECKS

Nowhere has the promise of benefits come back to haunt employers more visibly than in the field of health care. Employee insurance costs have been rising nearly 20 percent per year at many sizable companies. While there are several reasons for this, one major problem is the lack of incentive for either users or suppliers of medical services to contain costs as long as someone else is paying. As a result, a number of employers have sought to alter the indemnification structure by raising deductibles and limiting coverage in the belief that if employees bear more of the costs, they will consume fewer medical services.

But Paul W. Glover, senior vice president of the Travelers Managed Care & Employee Benefits Operations says this approach is only "chipping away at the problem." Changes have to be more pervasive in order to have a meaningful impact. The result is that employers who once told workers to just send them the doctor bills, and insurers, who once simply paid those bills, are both taking an aggressive role in shifting from reimbursement plans to a managed care approach. Managed care is a collection of activities that includes negotiating discounts from care providers, requiring second opinions, and encouraging preventive medicine. HMOs and PPOs are the principle mechanisms for controlling spending in the managed care approach, and both have grown rapidly. "We believe that almost all medical care will be delivered in a managed care environment in the near future", says Larry K. Lance, executive vice-president and director of the employee benefits division, ITT Hartford Insurance Company.

Advocates of managed care consider it the best hope for providing quality care and keeping insurance affordable. A survey of nearly 2000 companies conducted by Foster Higgins & Co. found that companies spent about $2683 for each employee enrolled in an HMO, — 17 percent less than the $3214 spent on employees in traditional indemnification plans. Moreover, while the cost per employee of HMO coverage rose 15.7 percent last year, indemnity plan coverage rose 21.6 percent. The study crystalizes the economic issues in health care financing: managed care seems to save substantial amounts — but costs are still rising at triple the inflation rate.

KEEPING EMPLOYEES HEALTHIER

Perhaps that is why another important theme in employee benefits is now prevention: limiting employees health care claims by keeping employees healthier. "The basic idea is to help employees and their families reduce demand on the system by improving their lifestyles and their ability to take care of themselves," says Donald M. Vickery, M.D., founder and chairman of the Center for Corporate Health, a Travelers subsidiary involved in wellness programs and other efforts to promote employee fitness.

The Travelers thoroughly studied its own programs in this area and found that the funds it spent on health promotion in 1990 helped it save $7.8 million in employee benefit costs — a savings of $3.40 for every dollar spent. The biggest payoffs came from education programs, including efforts to discourage smoking and drinking and encourage healthier diets.

While seeking to limit health care costs, employers have continued to widen the kind of coverage. For example Patrick Gribbon, President of the Delta Dental Plan of Michigan says, "Dental coverage is growing exponentially, even in an environment that is grinding every bit of value out of each benefit dollar." The reason, he says, is that "dental coverage is a popular benefit that does not cost too much to provide." According to Jim Bonk, President of the Delta Dental Plans Association "even after a decade of incredible growth, dental coverage comprises less than ten percent of a typical group's health care expenditures." It's not only large companies which can provide dental benefits. Delta Dental covers groups which range in size from "the 1.8 million dependents of the US Department of Defense down to two and three person start up firms," says Erik Olsen President of the Delta Dental Plan of California.

The newest coverage on the horizon is long term health care, an increasingly salient benefit for an aging workforce. "While only the largest employers initially offered long term care policies to their employees, we now see more mid-sized companies interested in sponsoring this coverage," notes Larry K. Lance of ITT Hartford.

Medical costs during retirement are a mounting concern for many employers. Last December, the Financial Accounting Standards Board stated that

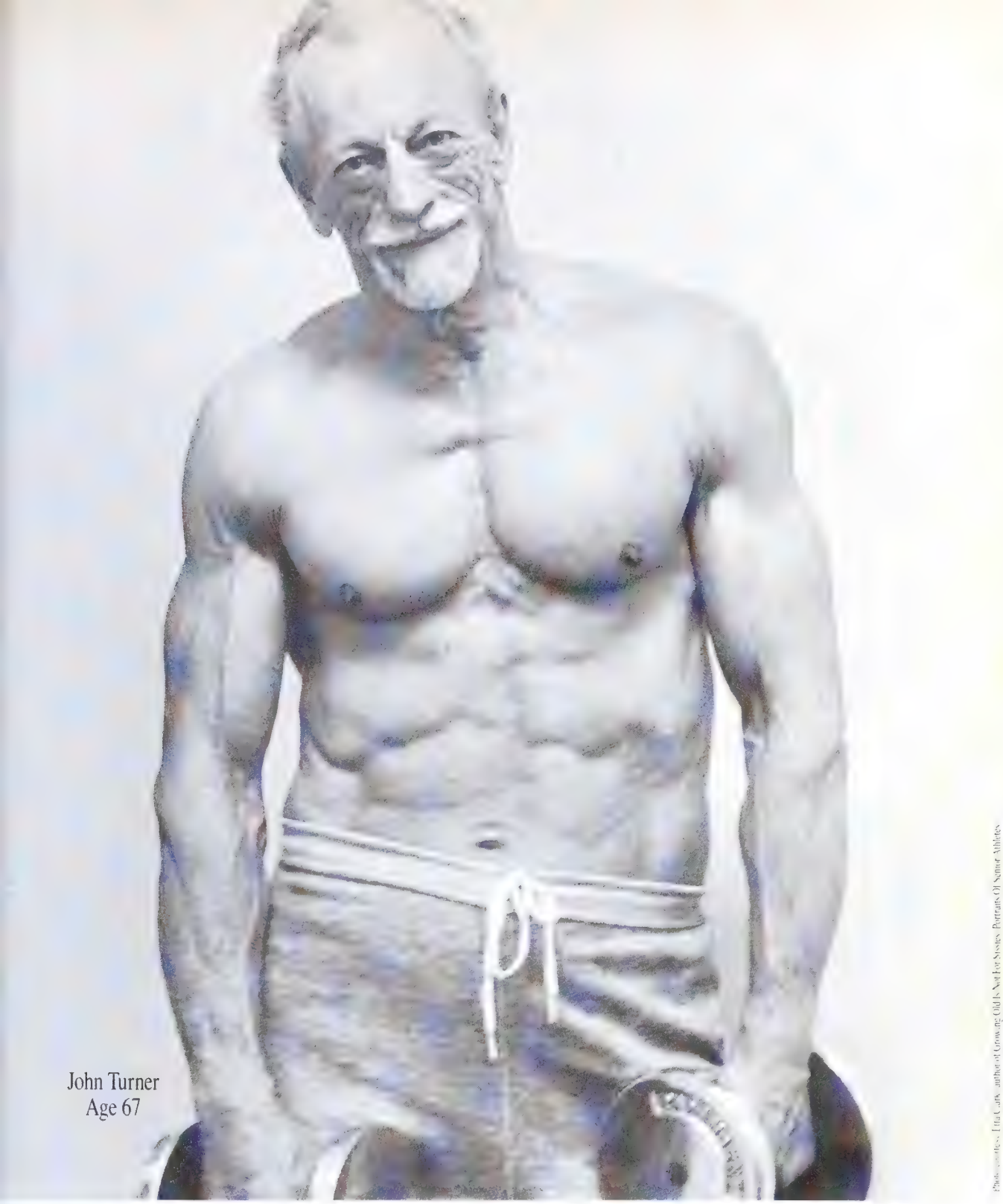
John Turner
Age 67

Photo courtesy Lita Clark, author of Growing Old Is Not For Sissies: Portraits Of Senior Athletes

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companies must begin to recognize these future obligations in their financial reports sometime before January 1, 1993. Companies can choose to take the financial hit immediately or spread the amount over 20 years. In September, General Electric took a $1.8 billion non-cash, after-tax charge against its quarterly earnings. Earlier this year, IBM took a $2.3 billion charge and Abbott Laboratories charged off $128.1 million. Although these sums are not actual cash outlays, they are subtracted from corporate earnings.

In addition, corporations have to tally new benefit liabilities as employees accrue them. To lower the size of the obligation they must report, many companies are renegotiating what they will provide current employees when they retire. Ralston Purina of St. Louis and Whitman Corp. of Chicago are among companies which have announced plans to stop subsidizing medical insurance premiums for future retirees.

Indeed, although the range of health related expenses for which employees receive benefits is increasing, the proportion of cost paid or reimbursed have often declined. Moreover, a study by Hewett Associates, a Lincolnshire, Illinois benefits consulting firm found that in 1990, 74 percent of employers required worker contributions to family health coverage, up from 63 percent in 1985. Increasingly, employees must be more prepared to share part of the cost for each component of their health care needs.

continued

OFFERING BENEFITS ABROAD

As more and more US companies expand internationally, many have sought to bring their employee benefit programs with them. But these efforts frequently run up against the enduring differences in national legal systems and social mores.

For example, health insurance benefits can often play only a very limited role in countries with universal public sector health insurance systems. Pension plans are also hard to replicate in countries that emphasize government retirement programs and don't provide favorable tax treatment for funding corporate pension plans.

Many corporate benefits managers have also been surprised by the difficulties encountered in trying to turn employees into shareholders. Stock and stock options have become highly popular in the US. They're considered a valuable incentive for helping the company prosper while binding the employee to the company. However, a number of American companies have found it difficult to transplant this benefit abroad.

EASIER SAID THAN DONE

After E.I. Du Pont launched an innovative global stock option program a few months ago, it discovered it couldn't provide stock options in nearly half of the 53 nations in which it operated because of laws either banning stock options or limiting ownership of foreign shares. The company substituted a "phantom stock" which gave employees cash in response to appreciation of the stock price without actually distributing stock. But in at least one Latin American country, Du Pont couldn't give employees these "appreciation rights," much less stock options.

In July 1988, PepsiCo unveiled a stock option plan called SharePower for about 40 percent of its employees around the world. It not only encountered legal hurdles in some countries, it also found that in certain parts of the world, financially unsophisticated staffers weren't familiar with stock or options and therefore weren't eager to embrace them.

Cultural problems have also hobbled these programs in countries with strong blue collar socialist traditions. In the UK, for example, shares and options for executives are well established, but share ownership among rank and file employees is fairly new. Some workers have seen proposals that might turn them into shareholders as a betrayal of their "class interests".

In most industrialized countries, however, the major issues are tax and regulatory. In France, employee profit sharing in cash is required of all but the smallest companies. But profit sharing in the form of company stock can be done only through highly complex procedures. German law provides only limited incentives for companies to put stock in the hands of employees. Stock provided by a company to its employees is generally treated as taxable income at the time of transfer unless there is a risk of forfeiture, and in the case of stock options, a tax liability is created at the time the option is exercised.

As a result of the legal issues, some companies have emulated Du Pont in creating "phantom stock" as a form of compensation that acts like shares of stock but isn't really stock because that would be too difficult...or illegal. For many executives at multinational corporations, the real phantom turns out to be the universally applicable employee benefit.

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RETIREMENT PROGRAMS: SHARE THE RISK

There is also an important shift underway in retirement benefits. Mary Barnabee of Dreyfus Corp. notes that defined contribution plans are growing rapidly and now have more assets than defined benefit plans. Defined benefit plans pay a specific benefit to retirees—typically, a proportion of their wages before retirement. In such a plan, the employer puts aside money over the course of an employee's career and invests it in order to have funds to pay the pension. The employer takes the risk that the investments will generate the expected returns; if they don't the employer must supplement the original contributions.

Rather than take this risk, employers are increasingly turning to defined contribution plans, in which they specify what they will contribute to each employee's retirement fund, but the ultimate retirement income will depend on the investment results. Thus, the employee shares the investment risk. In return, employees have a larger voice in choosing how the funds will be invested. They also have greater "portability", — the ability to take accumulated funds with them when they move to a new employer.

401(k) plans have been a major component of this new approach to funding retirement income. "November 1991 marks the tenth anniversary of the IRS regulations that enabled employers, for the first time, to offer 401(k) plans," says Mary Rudie Barnabee, president of the Dreyfus Group Retirement Plans. A survey of 609 major companies by Buck Consultants revealed that while only 36 percent of them offered 401(k) plans in 1984, 91 percent had such plans by mid-1991.

The amount of money accumulating in these plans is significant. Barnabee says "The past decade has seen 401(k) assets grow from nothing to nearly $193 billion." According to a 1990 Greenwich Associates survey, nearly half of all 401(k) assets are invested in GICs (guaranteed investment contracts), with the second most popular asset, company stock, trailing by 20 percentage points. The reason for this emphasis on fixed-income investments, says Martin of Coopers & Lybrand, is that "Most employees are afraid of seeing a loss in their accounts," but in many cases, he points out "They don't realize they're taking on a long term inflation risk in order to give up the volatility risk."

Employers have been loathe to provide too much advice for fear of being sued by employees if their investments go sour. However, the Department of Labor has proposed rules that offer plan sponsors a "safe harbor" from fiduciary liability if they offer several adequately diversified investment alternatives as well as regular opportunities to transfer funds among them. In addition, as companies and employees become more comfortable with 401(k)s, not only are more investment alternatives being offered, there are signs that employees are becoming comfortable in taking them.

The growth of the 401(k) approach is being mirrored in the non-corporate setting with 403(b) plans, enabling a wide range of public employees, hospital workers, teachers and others to save for retirement.

Meanwhile, some sophisticated companies are developing what IBM calls a "cash balance plan" combining elements of both defined benefit and defined contribution plans.

EXPANDING THE 401(K) CONCEPT

The kind of sharing of control and of risks embodied in 401(k) plans seems to many observers to be the wave of the future in employee benefits. Companies want plans that give people choices to suit their needs, incentives to conserve funds, and risks to share with the company. Barnabee says, "Perhaps we will see the 401(k) concept of individual and corporate partnership expanded to assist in saving for long term medical care."

But that concept will take some getting used to for many people. While some employees have embraced the flexibility and portability, others are confused by the range of options. Martin says, "While its good to offer people choices, I'm not sure we do enough yet to help them make the right kind of choices." During the rest of this decade, the number of choices seems likely to expand and become more complicated. Advice on how to make informed choice will itself become an increasingly popular employee benefit.

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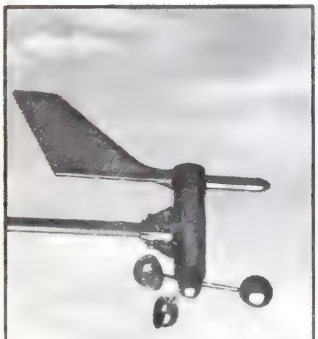

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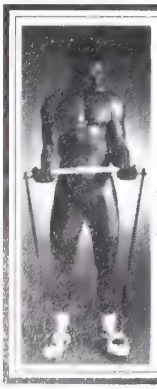

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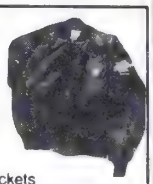

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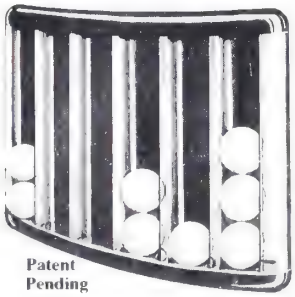

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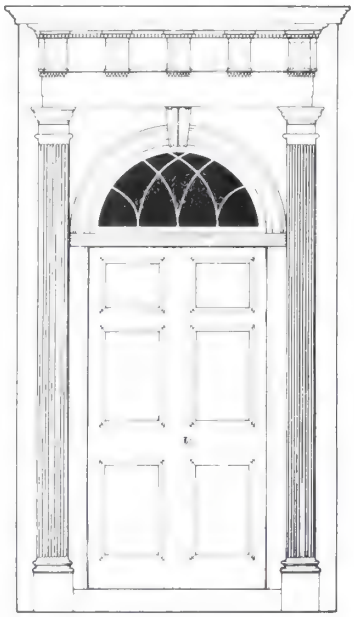
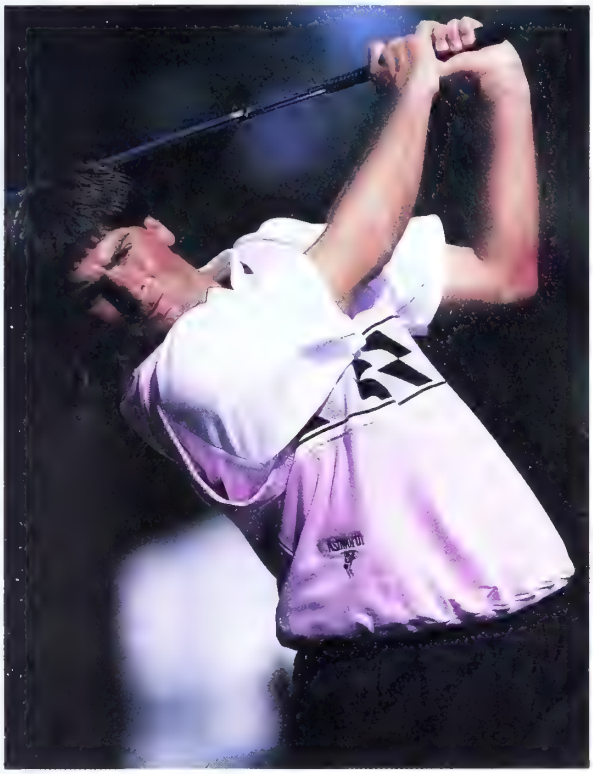


The PGA TOUR's Best at Pinehurst No. 2



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Autos

THE '92s: SNAPPIER, SNAZZIER, AND SAFER

As U. S. and foreign car makers unveil their 1992 models, some cars sport all-new looks and all-new names. Subaru's sleek SVX sports sedan, for example, has a unique window design that makes it seem as if the roof is supported entirely by glass.

But some of the most dramatic new offerings carry familiar nameplates. So, just because you know the old Eldorado, Mercedes S-class, or Camry doesn't mean you'll recognize the new one.

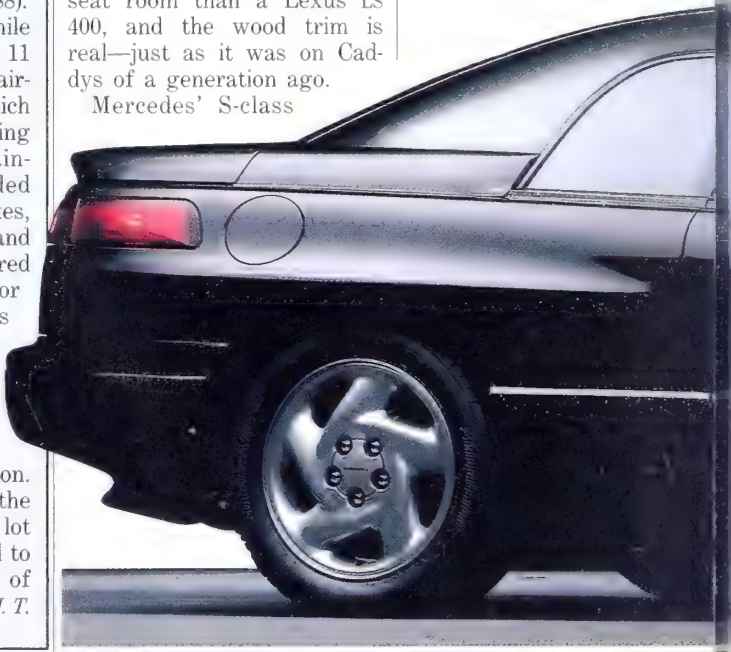
Cadillac's new Seville and Eldorado roll out with little resemblance to the past—or each other. Although they share the same engine and other under-the-skin parts, the two-door, $32,470 Eldorado and the four-door, $34,975 Seville are quite different in styling. (All prices are for base models, excluding taxes and destination charges.)

▲**MERCURY SABLE** Interior improvements include new seat fabrics and more pleasing gauge designs

◀**ELDORADO TOURING COUPE** This $35,000 Caddy has 50% more rear-seat room than a Lexus LS400

A LONG WAY. Move up to the $34,970 Eldorado Touring Coupe and the $37,975 Seville Touring Sedan, and they're even more distinct from other Cadillacs. The subtle Seville is styled to please luxury-import buyers: Chrome and other flashy accoutrements are gone in favor of an understated elegance. Add its firmer suspension, which produces notably tighter handling, and the Seville has come a long way from the barges of yore. The Eldorado, even in Touring Coupe trim, is slightly more American: squarish in design and still a bit vague in handling. Inside, though, improvements abound. This Eldo offers almost 50% more rear-seat room than a Lexus LS 400, and the wood trim is real—just as it was on Caddys of a generation ago.

Mercedes' S-class is another rejuvenated name plate. As usual, Mercede packs its cars with technolog cal wonders. Standard dow the line this year: prewirin for a car phone and memor controls that adjust the sea tilt-telescopic steering whee headrest, and all three rea view mirrors. The S-clas adds its own goodies. Its ai conditioners are free o chlorofluorocarbons, and sep arate thermostats are sta dard for driver and front pas senger. An optional syste lets rear passengers creat distinct third and fourth "cl



SNUGGER SEATBELTS, SURER BRAKES

Safety belts are still your first defense in a crash. If you dislike motorized or door-mounted belts so much that you're tempted to disconnect them, buy a car with belts you will use. A major improvement: adjustable shoulder-belt anchors that allow both tall and short drivers to raise or lower the belt above their left shoulders for a snug, more comfortable fit. They'll appear on the new Toyota Camry, Honda Accord, Olds 88, and others.

Airbags are so effective in head-on crashes—though less so in side collisions or rollovers—that carmakers are offering them in lots of new models. Honda provides a standard driver's airbag in the $10,555 Civic but, surprisingly, not in the Acura Integra, which is expected to cost about $2,000 more when its price is set. The $14,980 Ford Taurus is the least expensive car with an optional passenger-side airbag ($488).

Studies show that while the average driver will go 11 years before needing an airbag, antilock brakes, which let you steer while braking hard on snowy or rain-slicked roads, are needed once a year. Luxury makes, such as Lincoln Mercury and Mercedes-Benz, have offered them at no extra charge for years. But General Motors is leading the drive to make them standard on models under $10,000 like the Chevy Beretta and Cavalier. Otherwise, they're a $400 to $900 option. Safety tip: After buying the car, take it to a parking lot on a rainy day to get used to the unfamiliar pulsating of the brake pedal. *J. T.*

ate zones." In addition, the de windows are double-ned to prevent fogging and educe noise. Indeed, they are nazingly quiet cars. The neup includes four gasoline-owered cars and a turbo-harged diesel model, all with ne refined yet practical inte-ors Mercedes is known for. rices on the S-class cars nge from $69,400 for the 0SE to $127,800 for the 0SEL.

IFTY. The exteriors of the 4,980 Ford Taurus and 5,928 Mercury Sable look ery similar to last year's odels. To find out what's ew, sit behind the wheel. mong the subtle improve-ents: new seat fabrics, more easing gauges, an extra set radio controls located clos-to the steering wheel, and nifty feature that scales ack the radio's volume when ne motor is turned off—reat if your rap-loving teen-ger drove the car last. In ad-tion, a host of mechanical nanges reduces interior oise, while a V-6 is standard. Mazda's 929 adds some-ing the old flagship sedan cked: styling panache. The ng, low look is faintly Jag-aresque, complimented by me interior styling cues, ch as a forward-tilting in-rument panel. Unfortunate-, the 929 shares Jaguar's

BUILT-IN CHILD SEATS Chrysler's $200-a-pair option on minivans

limited headroom. It can also be a bit skittish on curves, and the accelerator pedal is too sensitive, which makes for lurching starts. There's an optional solar-powered fan to cool down the $27,800 sedan's interior on hot days.

Buick's new, compact $13,560 Skylark is loaded with functional and convenient features, from a console storage bin between the front seats large enough for a fold-up umbrella to standard antilock brakes. Inside, the Skylark's instrument panel sweeps into the doors as it does on the hugely successful Park Avenue Ultra. Outside, the Skylark imitates nothing: Its pointy front end is dramatically different from the exteriors of its sister models, the Pontiac Grand Am and the coming Oldsmobile Achieva.

The $27,700 Audi 100 has a new body, a more spacious interior, and 250 pounds more than its predecessor. Fortunately, it also has a new 172-horsepower V6 engine to replace the 130-hp five-cylinder for extra reserve power, plus bigger brakes. Compared with its predecessor, the 100 is notably more poised in turns, and it downshifts more smoothly.

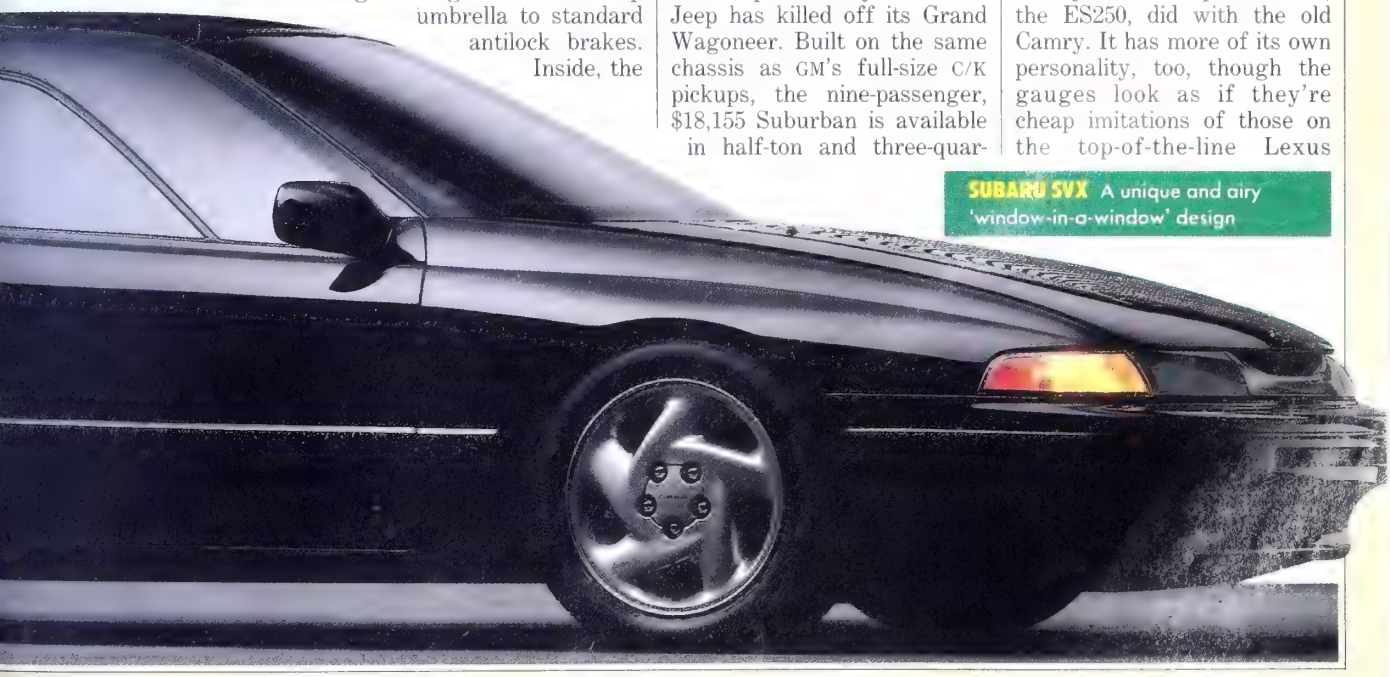
Chevrolet's new Suburban is aimed at the horse-hauling crowd, particularly now that Jeep has killed off its Grand Wagoneer. Built on the same chassis as GM's full-size C/K pickups, the nine-passenger, $18,155 Suburban is available in half-ton and three-quarter-ton versions—and can tow up to 10,000 pounds. Despite a wheelbase two inches longer than the old Suburban's, this one is slightly shorter overall. Interior passenger space is greater, and a 4-foot-by-8-foot sheet of plywood can still lie flat in back. It will be available in Texas and California before going nationwide.

FINE FIT. The Toyota Camry has widened and lengthened into a midsize. Toyota says the $14,368 Camry, with a four- or six-cylinder engine, tops the best-selling Honda Accord in quietness and other areas of comparison. Certainly, it's tightly put together, with Toyota's usual fine fit and finish and improved structural rigidity. It also got a driver's airbag and adjustable shoulder-belt anchors.

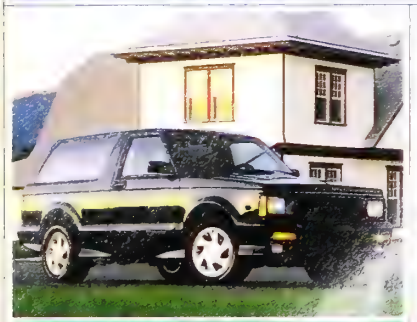
At Toyota's Lexus division, the $25,250 ES300 shares fewer mechanicals with the new Camry than its predecessor, the ES250, did with the old Camry. It has more of its own personality, too, though the gauges look as if they're cheap imitations of those on the top-of-the-line Lexus

▲**MERCEDES 600SEL** Standard phone prewiring and separate thermostats for driver and front passenger

◀**PORSCHE 968 COUPE** The closer the tach needle gets to the red line, the better the engine performs



SUBARU SVX A unique and airy 'window-in-a-window' design



GMC TYPHOON A 4x4 that [illegible] 0 to 60 in less than five [illegible]

LS400. The new $32,000 SC300 coupe's standard V6 isn't as powerful as the already introduced SC400's V8, but it comes with either manual or automatic transmission.

Chrysler gave its minivans new interiors and mechanicals last year, and it hasn't changed them much this fall. In an industry first, however, Chrysler is offering optional child seats that are built into the second-row seats in its family-movers. The safety seats use a five-point design, anchoring the belts at both shoulders, across the lap, and between the legs. They meet all regulations for child car seats, cost $200 for the pair, and allow parents to say goodbye to lugging portable seats from car to car. When not in use, the seats can be flipped back to unveil a standard backseat to accommodate adults.

Among the new cars that have new names, four stand out. Foremost is the Porsche 968. Porsche is outstanding in its ability to make each model unmistakably a Porsche and yet distinct. It's a styling skill shared by only a few others—Jaguar, say, and Mack Truck. The $44,500 968, which replaces the 944, is a beauty, with round headlights that lean backward. The four-cylinder engine mates to either a six-speed manual or Porsche's unique Tiptronic transmission, an automatic that can shift like a manual. Either way, the closer you push the tachometer needle to the red line, the better the engine performs.

Mitsubishi's new Expo and Expo LRV are mini-minivans. The slightly larger, $13,549 Expo has seven seats—but don't expect it to hold seven adults. The five-passenger, $11,169 LRV is more practical. It sits as high as a Dodge Caravan, and the ample headroom and generous windows give it an airy feel. Think of it as a spacious, subcompact station wagon. But remember that you'll pass up the space of a true minivan if you pick the $13,889 version with all-wheel drive.

GMC Truck has plucked the 4.3-liter turbocharged and intercooled V6 engine from its Syclone pickup truck and dropped it into an off-road vehicle. The $28,995 Typhoon goes from 0 to 60 in less than five seconds, making it more suitable for pole positions than climbing out of canyons.

Subaru's new SVX sports sedan is loaded with gadgets including all-wheel drive, driver's-side airbag, motorized shoulder belts, and a horizontally opposed six-cylinder engine. (Think of it as a V6 with a 180-degree V.)

This $25,000 high-performance racer hugs the road and draws stares for its "window-in-a-window" design which features additional glass above and around the smallish windows. The SVX replaces the wedge-shaped XT in Subaru's lineup. *Jim Treece*

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Smart Money

WHEN HEAVY DEBT CAN LIFT A STOCK

Corporate America's love of leverage has cooled. Nevertheless, some investment pros are encouraging investors to snap up shares of companies mired in debt.

These experts believe that heavily leveraged companies have more to gain from declining interest rates and a rebounding economy than companies with little or no debt. By taking the opportunity to refinance or pay down expensive debt, leveraged businesses can increase cash flow and lift both earnings and stock values, says Anand Iyer, vice-president for research at Salomon Brothers.

HAIL CAESAR. A recent Salomon study reveals that a 1% rise in cash flow causes the equity value of a company with a 75% debt-to-capital ratio to go up 4%. The greater the debt, the bigger the impact on the equity. Conversely, a company with no debt posts an increase of just 1% in equity value on a 1% cash-flow rise.

Some investors have already made a bundle on leverage stocks. In the first eight months of 1991, the shares of 28 heavily indebted companies, including RJR Nabisco and Caesar's World, produced an average return of 69.2%, compared with a 22% gain for Standard & Poor's 500-stock index.

RJR shares, for example, have nearly doubled, to 10¾, since they were first issued to the public on Feb. 1. Analysts say a reduction in the company's debt-to-capital balance to 70% from 88%, along with lower interest costs on the remaining $16.5 billion in debt, have helped push up the stock.

Caesar's World, carrying $419 million in debt, has seen its stock price jump 90% this year, to more than $31 a share. The hotel-and-casino operator has reaped the benefits of a gambling resurgence in Nevada and Atlantic City. But it is also expected to gain from refinancings. Mark Brostowski, high-yield-securities analyst at Salomon, says Caesar's could save $6.5 million to $9 million annually in interest—or 18¢ to 24¢ a share. That could translate into a 10% increase in earnings and a corresponding climb in the stock.

The Salomon analysts are watching other leveraged companies, including Kroger, Safeway, TW Holdings, Viacom, and Duracell. They favor some bonds and preferred and convertible stocks as well as common shares. For example, they estimate that the common and convertible preferred shares of Chiquita Brands International, whose debt exceeds $1 billion, will each produce a return of 25% in a year.

If a strong recovery fails to materialize, or interest rates start edging up, all bets are off. "The highly leveraged stocks are the ones that will perform the worst," says Jack Sullivan, a principal at Van Kasper & Co., a San Francisco investment firm. Such a scenario would forestall efforts to improve operations and to clear high-cost debt off the balance sheets. *Gene Marcial*

SOME ENTICING LEVERAGE STOCKS

	Debt-to-capital	Stock price*
CAESARS WORLD	53.2%	31⅜
CHIQUITA BRANDS	53.2	40¾
RJR NABISCO	72.9	10¾
SAFEWAY	93.0	18⅞
TW HOLDINGS	96.0	3½

*Oct. 21. DATA: SALOMON BROTHERS INC

After taking the plunge in the cool water the city's pulse slowed and I began to unwind. Escaping to a rooftop pool in the very centre of New York was not what I had in mind when I had arrived. But the experience was one that could only be described to the uninitiated as swimming over Manhattan.

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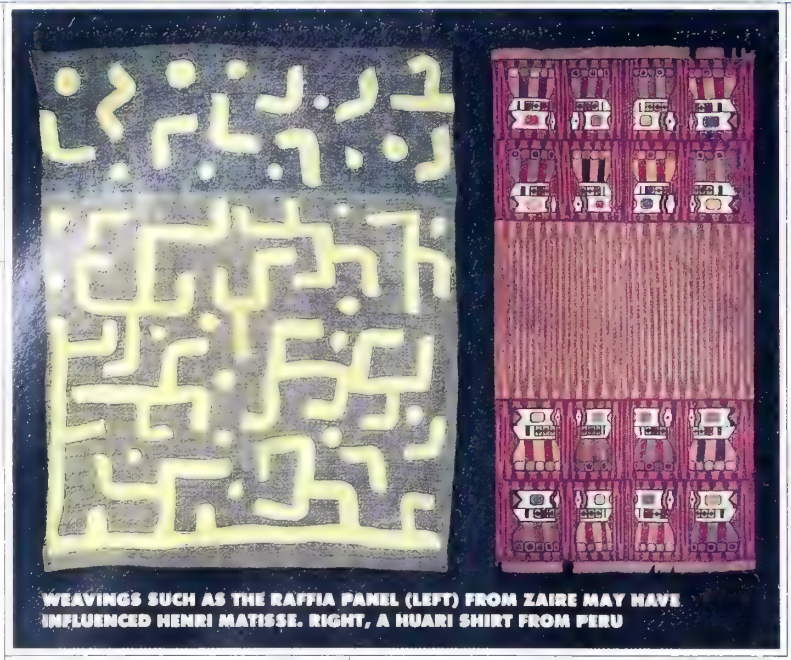
Collecting

TEXTILES THAT WEAVE A MAGIC SPELL



WEAVINGS SUCH AS THE RAFFIA PANEL (LEFT) FROM ZAIRE MAY HAVE INFLUENCED HENRI MATISSE. RIGHT, A HUARI SHIRT FROM PERU

Art collectors scouting for new fields are discovering the textiles of Indonesian headhunters, West African peoples, and the Indians of South America, among others. While the art market has languished after the big run-up of the 1980s, many dealers report a surge of interest in woven fabrics with eye-catching patterns and exotic origins.

Modern societies think of textiles as strictly utilitarian materials that are used for a few months or years, then thrown away. But earlier cultures treated fine robes and ceremonial hangings as treasured objects. These pieces were used ritualistically for weddings, funerals, and circumcision rites. "The older pieces survive," says Mary Hunt Kahlenberg, a Santa Fe (N. M.) gallery owner, because "they were thought to have substantial religious or magical powers. So they were only taken out of storage a couple of times a century."

EERIE CHARM. Modernization has changed the value systems of many textile-producing societies, leading families to sell their heirlooms. Some of the most coveted materials come from the Indonesian archipelago, whose weavings rival those of the Middle East in variety and fineness of technique yet are not as well-known. Says Carlton Rochell, an expert on Asian art at Sotheby's: "They are very pretty, and the market is at its beginning stages."

Quality Indonesian pieces had spiritual purposes, and they exude an eerie charm. Borneo headhunters wrapped their trophies and draped their sacrificial altars in specially woven red-and-black cloths that were hidden from outsiders. Other Indonesians wrapped their dead in weavings that bear rows of stylized skeletons sprouting trees to symbolize the renewal of life through death.

The prices of some of the finer Indonesian primitive textiles have shot up as high as $20,000 in recent years. But good examples of silks and batiks from Sumatra and Java can still be found for $1,000 to $3,000.

West and central African weavings are also high on collectors' lists. The geometric raffia panels of the Kuba people of Zaire, thought to have influenced the work of artists such as Henri Matisse, bring the highest prices—up to $20,000 for fine old ones. The dazzling checkerboard kente cloths produced by the Ewe people of Ghana can go for up to $10,000—although excellent antique specimens sell for $2,500 to $4,000.

AUCTION RECORD. But you don't have to pay stiff prices to get quality stuff. Fine Mali cottons go for less than $500. And Eric Robertson, a New York-based African art dealer, says that tie-dyed textiles, worth collecting and costing less than $100, are still being made all over West Africa.

Latin America is another major source of precious textiles. The striped mantles of the Aymara Indians of Bolivia have developed a strong following in the U. S., according to New York dealer Mark Shilen. Some of the strangest and most sophisticated of all weavings were left by the Indian civilizations of pre-Columbian Peru. Earlier this year, a pink-and-red Huari shirt (circa 500 to 800 A. D.) sold for $90,750 at Sotheby's—an auction record for a pre-Columbian textile. But you can find good pieces for $5,000 to $10,000. So, collectors are discovering that they can purchase a weaving of great age for roughly the same money as more modern high-quality textiles, says Stacy Goodman, a pre-Columbian specialist at Sotheby's. Expert caution that because of possible legal problems, you should only buy pre-Columbian objects from reputable auction houses and galleries that can prove they are not dealing in smuggled goods.

Getting started in textile collecting is an adventure in itself. Pieces have no signatures or dates, and few sell at auction, so clear price guidelines aren't established. You can educate yourself through books available in museum libraries and bookstores or by visiting the Textile Museum in Washington D. C. But many experts say the best way to begin is to plunge in and buy some pieces you like. *Stanley Reed*

A WOMAN'S GARMENT FROM SUMATRA

CLOCKWISE FROM BOTTOM: PHOTOGRAPHS COURTESY OF MARY HUNT KAHLENBERG, TEXTILE ARTS INC. (2); SOTHEBY'S

Worth Noting

- **FILE NOW, PAY LATER.** Next year, the IRS will accept electronically filed 1991 returns from taxpayers who owe money, not just from those due refunds. Payment can wait until Apr. 15 even if you file earlier.
- **ROOM WITH A CHECK.** Some 41 Omni Hotels guarantee Select Guest members a room—or a payoff. If a reservation isn't honored, the hotel pays $200 and finds you a room elsewhere.
- **GADGETEER ALERT.** After 25 years, Chicago's big Consumer Electronics Show will open to the public next May 30-31. Previously, only dealers got to see the newest TVs, stereos, and other items from 400 makers. Tickets will cost $10 at the McCormick Place exhibition hall.

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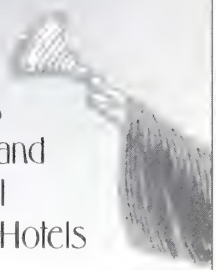

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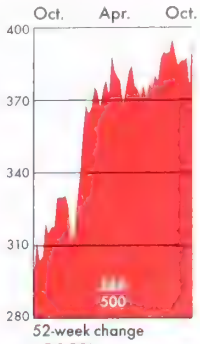
nvestment Figures of the Week

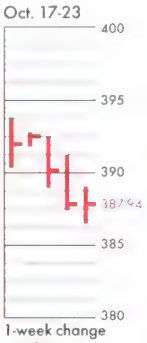
MENTARY

itock market again rose to ll-time high, with the Dow s industrial average climb- o 3077 on Oct. 18. Investors buoyed by upbeat earnings ctations. But the market d back during the next two , partly in reaction to weak d prices. Talk of a tax cut to ulate the economy riled d-income traders. The rise in est rates, however, pulled dollar upward. Small stocks e also gainers, as was the ro stock market.

STOCKS

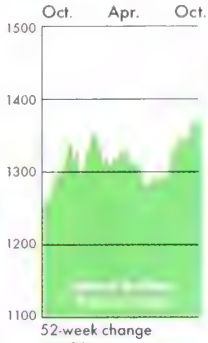


52-week change **+24.1%**

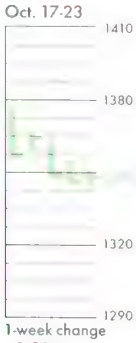


1-week change **−1.2%**

BONDS

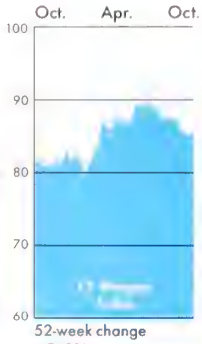


52-week change **+6.8%**

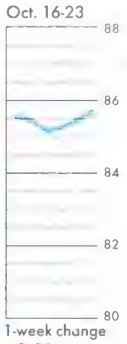


1-week change **−1.9%**

THE DOLLAR



52-week change **+5.4%**



1-week change **+0.2%**

ARKET ANALYSIS

. STOCKS	Latest	% change Week	% change 52-week
V JONES INDUSTRIALS	3040.9	−0.7	21.4
COMPANIES (Russell 1000)	204.3	−1.3	26.9
LL COMPANIES (Russell 2000)	183.0	0.1	49.7
COMPANIES (Russell 3000)	217.6	−1.2	28.1

REIGN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
DON (FINANCIAL TIMES 100)	2561.1	−0.7	21.4
YO (NIKKEI INDEX)	24,799.9	1.9	−0.3
ONTO (TSE COMPOSITE)	3459.2	−0.1	10.8

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	5.18%	5.11%	7.5%
30-YEAR TREASURY BOND YIELD	8.08%	7.88%	8.8%
S&P 500 DIVIDEND YIELD	3.24%	3.21%	3.8%
S&P 500 PRICE/EARNINGS RATIO	20.8	20.1	13.8

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	382.9	382.6	Positive
Stocks above 26-week moving average	53.3%	52.5%	Negative
Speculative sentiment: Put/call ratio	0.47	0.46	Positive
Insider sentiment: Vickers sell/buy ratio	2.82	2.69	Negative

NDUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

UR-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
OLD MINING	11.8	−6.8	PLACER DOME	14.9	16.0	12 1/2
OMPUTER SOFTWARE AND SERVICES	10.9	57.1	ORACLE SYSTEMS	35.2	133.3	14 7/8
AILROADS	10.7	55.3	SANTA FE PACIFIC	27.8	−17.1	11 1/2
APER CONTAINERS	10.4	87.0	STONE CONTAINER	17.7	165.7	23 1/4
RANSPORTATION SERVICES	9.1	12.4	RYDER SYSTEM	9.2	42.6	19 1/4
UR-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
OSPITAL MANAGEMENT	−24.2	−14.5	COMMUNITY PSYCHIATRIC CENTERS	−49.3	−45.5	14 3/8
EPARTMENT STORES	−11.5	38 8	NORDSTROM	−25.4	60.5	34 1/2
AVINGS AND LOANS	−9.1	58.8	H. F. AHMANSON	−11.9	28.6	15 3/4
PECIALTY APPAREL RETAILERS	−7.3	98.3	TJX	−14.7	39.8	14 1/2
ACHINE TOOLS	−6.8	−6.8	CINCINNATI MILACRON	−12.5	−18.9	9 5/8

UTUAL FUNDS

MORNINGSTAR INC

ADERS

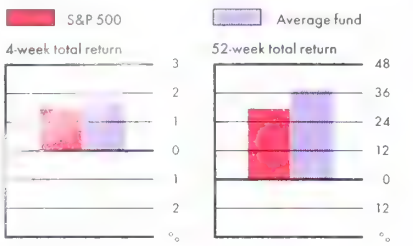
-week total return	%
QUITY STRATEGIES	18.5
NITED SERVICES WORLD GOLD	14.1
ENHAM GOLD EQUITIES INDEX	12.8

week total return	%
PPENHEIMER GLOBAL BIO-TECH	145.1
GM CAPITAL DEVELOPMENT	105.5
INANCIAL STRATEGIC HEALTH SCIENCES	101.6

LAGGARDS

Four-week total return	%
AFUTURE	−3.4
MUTUAL OF OMAHA GROWTH	−3.2
ALLIANCE NEW EUROPE B	−3.0

52-week total return	%
STRATEGIC INVESTMENTS	−16.7
USF&G EUROPEAN EMERGING COMPANIES	−14.7
STRATEGIC GOLD/MINERALS	−14.0



ELATIVE PORTFOLIOS

DATA RESOURCES INC

lar amounts
resent the present
ue of $10,000
ested one year ago
ach portfolio

centages indicate
-day total returns

U. S. stocks	Treasury bonds	Foreign stocks	Money market fund	Gold
$12,427	**$11,784**	**$11,202**	**$10,559**	**$9,769**
−0.81%	−2.16%	+0 80%	+0.10%	+1.16%

data on this page are as of market close Wednesday, October 23, 1991, unless otherwise indicated
stry groups include S&P 500 companies only; performance and share prices are as of market close October 22. Mutual fund returns are as of October 18. Relative portfolios are valued as of October 22
A more detailed explanation of this page is available on request.

DON'T LET '80s REMORSE CHOKE '90s GROWTH

There are financial woes, headaches, and hangovers. And then there's the regulatory legacy of the Excessive Eighties: A migraine that reminds Washington policymakers each day just how badly they misjudged the speculation that became the hallmark of the era. For sheer pain, nothing matches the agony of the savings-and-loan debacle, which could cost taxpayers as much as $500 billion over the next three decades.

Given the S&L fiasco, the response of politicians and regulators to the forces unleashed in the '80s was predictable: promises to batten down the hatches in the '90s. But policymakers must be careful that they don't overreact. While they need to get tougher to prevent the abuses of the recent past, they must be flexible enough to avoid crippling the U. S.'s economic growth, slowing financial innovation, and limiting America's competitive position in the global capital markets.

Finding that happy medium will not be easy. Regulators have moved appropriately to wring the abuses of the 1980s out of the markets: Bank examiners have ordered lenders to take sharp write-downs on shaky loans, forcing painful losses, if not insolvencies, at many institutions. Insurance companies, stuck with too many worthless junk bonds and real-estate loans, now find state regulators considering tougher capital requirements and restricting the investments they can make. And, in the wake of revelations that several Treasury Dept. auctions were rigged, reformers would like to break up the cozy club of Wall Street firms that enjoy preferential rights in purchasing government bonds, preventing any recurrences that they feel could threaten the integrity of the Treasury market.

But regulators must not go too far. Bank field examiners, for instance, have forced many institutions to write dov their commercial real estate loans to what amounts to li uidation value in today's depressed markets. That's tr even when the borrowers are current on payments and e pect to be for the foreseeable future. While real esta loans should be suspect these days, forcing banks to wri them down that far is going overboard. Similarly, the ne capital requirements banks must adhere to may be stiff than needed. Without undermining them entirely, regulato could allow more preferred stock to be used to meet th standards, as the Treasury Dept. has proposed. That wou achieve the laudable goal of boosting capital without in pairing some banks' ability to make loans.

In the 1980s, Reagan Administration regulators saw the mission clearly: Stay out of the way of capitalism. But tha strategy proved to be flawed when deregulation was not a companied by increased surveillance. The Bush Adminis tration seemed prepared to take a more balanced approach But with the economy stumbling and an election year jus around the corner, there are some troubling signs that th White House may be weakening its resolve. To jump-star the economy, the Administration wants examiners to re think their standards so that banks can continue lending t such highly leveraged borrowers as cable-TV franchises an real estate developers. But the bloom is off the cable-T rose, and the country has enough commercial office tower to last for years. Tossing good money after bad would b foolhardy. The vital question now is whether the Whit House will ditch a healthy long-term regulatory strategy fo short-term political gains. The answer will demonstrat whether the Bush Administration has learned any lessons from the Excessive Eighties.

A MODEL FOR U.S. BUSINESS—IN GERMANY

If you drew up a list of the ailments handicapping U. S. business as it tries to compete abroad, the American preoccupation with the short run would be high on the list. Wall Street's absorption with short-term profits, a comparatively niggardly emphasis on research and development, and management's zeal for cutting costs by paring payrolls are all-too-familiar examples of how the pressure for quarter-by-quarter improvement in profits can hurt, not help, U. S. companies.

Try to imagine a company that operates in the following way: It need not worry about quarterly profits since it only reports earnings once a year, and it's probably privately owned, anyway. This enterprise hires employees while they are still in high school and spends $18,000 a year for as many as four years to train them as apprentices. Its R&D outlays are growing by over 20% a year. The export market accounts for over 50% of the sales of this company's technology-intensive products. Hard to imagine? Not really.

In fact, companies such as this exist—in Germany, where they are collectively known as the *Mittelstand*, or mid-ranking. These companies, all of which employ fewer than 500 workers, produce two-thirds of Germany's gross national product and account for 30% of its exports (page 58). And that's not small *Kartoffeln*: Last year, the Germans sold $421 billion worth of exports—comfortably ahead of the U. S.'s $394 billion and Japan's $286 billion.

The striking success of these German companies has attracted attention from a growing number of U. S. executives who believe the *Mittelstand* could serve as a model for U. S. exporters. And so they could, if American managers can raise their eyes high enough to take the long view. It is important that these companies are small, fast on their feet, and unbureaucratic, but even more important, that they are farsighted.

November 11

BANKING THE NEWEST TROUBLE SPOT

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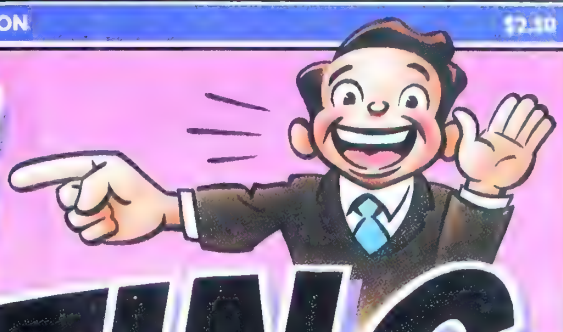

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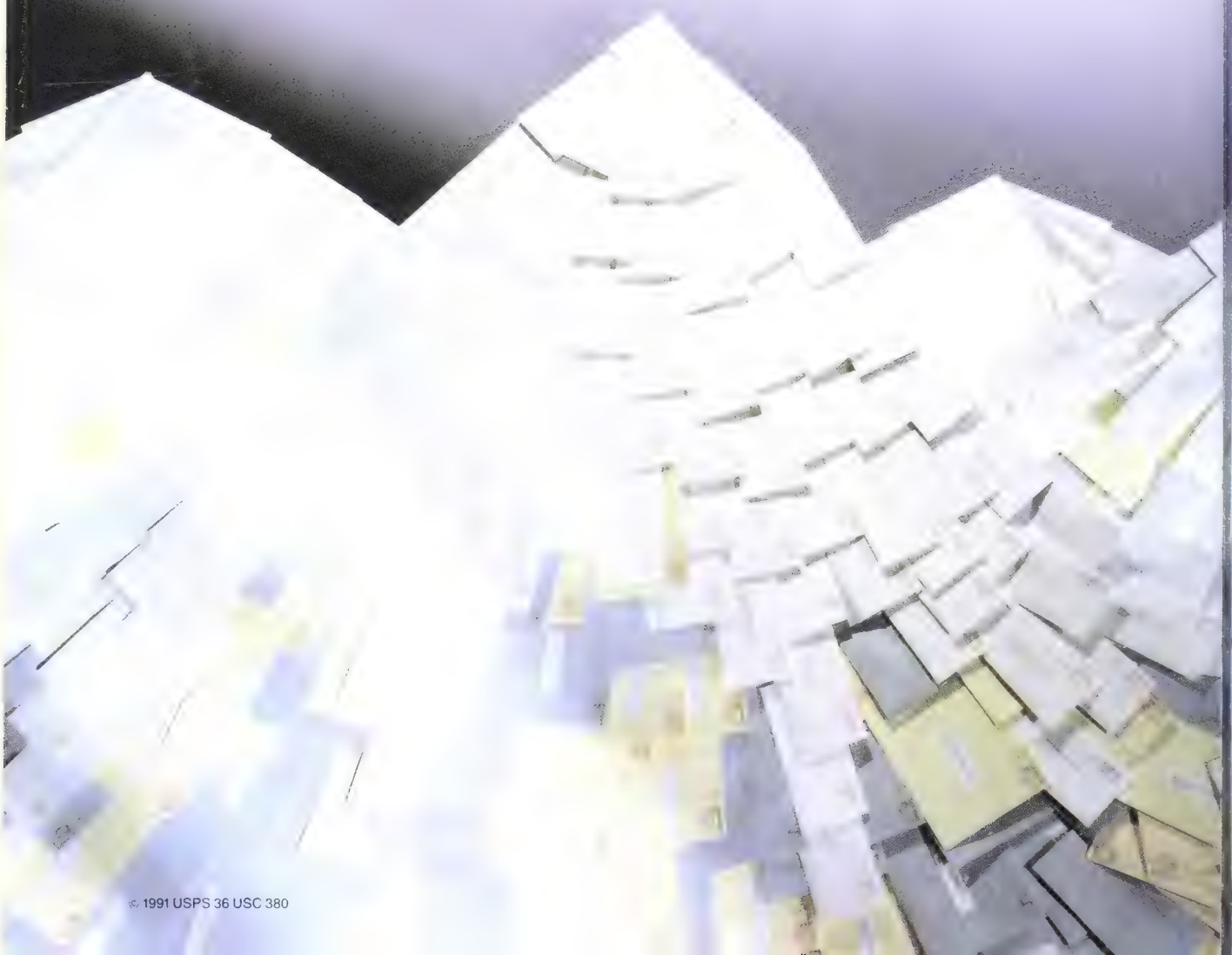

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NUMBER 3239 **BusinessWeek** NOVEMBER 11,19

BANG FOR THE BUCK: EVERYWHERE, FROM WAREHOUSE CLUBS TO CAR LOTS TO FAST-FOOD EATERIES, MARKETERS ARE STRESSING VALUE

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Gone are the days when flashing a certain credit card or driving a swank brand-name car granted status. Consumers now demand value when they open their wallets. Price isn't the sticking point—as long as it's fair. But today's watchwords are quality and service. And companies that hope to succeed in the 1990s are getting the message

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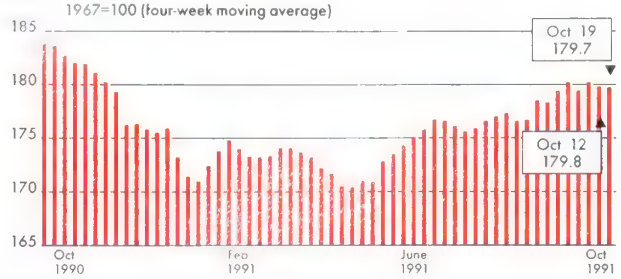
BusinessWeek Index

PRODUCTION

Change from last week: −0.1%
Change from last year: +1.3%

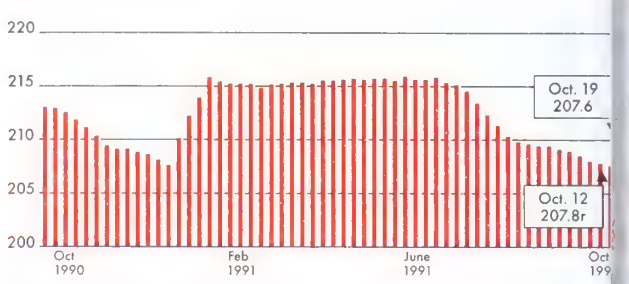


The production index was virtually unchanged during the week ended Oct. 19. On a seasonally adjusted basis, output levels of autos and trucks were up sharply, and lumber increased as well. However, electric power, crude-oil refining, and paperboard production all fell while steel, coal, and paper output and rail-freight traffic were flat from the previous week. Before calculation of the four-week moving average, the index rose to 181, from 180 in the week before.

BW production index copyright 1991 by McGraw Hill Inc

LEADING

Change from last week: −0.1%
Change from last year: −2.0%



The leading index fell slightly during the week ended Oct. 19. The index ha been in a steady decline since June, raising concerns for economic growth in earl 1992. In the latest week, higher bond yields, rising business failures, and slowe growth in real estate loans and M2 offset the positive signs of higher stock price amd improving prices for materials. Before calculation of the four-week movin average, the index increased to 207.7, from 207.5

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (10/26) thous. of net tons	1,778	1,682#	−3.5
AUTOS (10/26) units	140,241	136,659r#	−4.6
TRUCKS (10/26) units	87,729	88,753r#	12.1
ELECTRIC POWER (10/26) millions of kilowatt-hours	52,504	52,315#	2.8
CRUDE-OIL REFINING (10/26) thous. of bbl./day	12,698	12,994#	0.7
COAL (10/19) thous. of net tons	19,911#	19,955	−5.0
PAPERBOARD (10/19) thous. of tons	776 8#	796.3r	0.9
PAPER (10/19) thous. of tons	756 0#	757.0r	−0.9
LUMBER (10/19) millions of ft.	507.6#	501.0	8.1
RAIL FREIGHT (10/19) billions of ton-miles	21.4#	21.3	0.9

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (10/30)	131	131	129
GERMAN MARK (10/30)	1.68	1.70	1.51
BRITISH POUND (10/30)	1.74	1.71	1.95
FRENCH FRANC (10/30)	5.73	5.82	5.05
CANADIAN DOLLAR (10/30)	1.12	1.13	1.17
SWISS FRANC (10/30)	1.47	1.48	1.27
MEXICAN PESO (10/30)[3]	3,056	3,052	2,918

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (10/30) $/troy oz.	359.350	362.200	−5.3
STEEL SCRAP (10/29) #1 heavy, $/ton	97.00	97.00	−12.2
FOODSTUFFS (10/28) index, 1967=100	207.0	207.4	−2.2
COPPER (10/26) ¢/lb.	110 6	110.3	−16.0
ALUMINUM (10/26) ¢/lb.	55.1	53.0	−32.6
WHEAT (10/26) #2 hard, $/bu.	3.77	3.60	35.1
COTTON (10/26) strict low middling 1-1/16 in., ¢/lb.	57.90	58.13	−18.6

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Chan year a
STOCK PRICES (10/25) S&P 500	387.05	390.74	24
CORPORATE BOND YIELD, Aaa (10/25)	8.63%	8.54%	−8
INDUSTRIAL MATERIALS PRICES (10/25)	95.9	96.8	−8
BUSINESS FAILURES (10/18)	409	329	25
REAL ESTATE LOANS (10/16) billions	$396.3	$396.4r	2
MONEY SUPPLY, M2 (10/14) billions	$3,399.9	$3,401.2r	2
INITIAL CLAIMS, UNEMPLOYMENT (10/12) thous.	452	423	7

Sources: Standard & Poor's, Moodys, *Journal of Commerce* (index: 1980=100), Dun Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally a justs data on business failures and real estate loans.

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Chan year a
PERSONAL INCOME (Sept.) annual rate, billions	$4,846.7	$4,823.8	3
CONSUMER SPENDING (Sept.) billions	$3,864.7	$3,831.5	3
NEW HOME SALES (Sept.) annual rate. thous.	446	512r	−11
ORDERS FOR DURABLE GOODS: MFG. (Sept.) billions	$121.5	$125.5r	−4

Sources: Commerce Dept

MONETARY INDICATORS

	Latest week	Week ago	% Chan year a
MONEY SUPPLY, M1 (10/14)	$873.0	$876.0r	6
BANKS' BUSINESS LOANS (10/16)	299.6	298.3r	−7
FREE RESERVES (10/16)	782r	703r	31
NONFINANCIAL COMMERCIAL PAPER (10/16)	136.4	135.3	−14

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed fo two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Ye a
FEDERAL FUNDS (10/29)	5 11%	5.25%	8 17
PRIME (10/30)	8.00	8.00	10.00
COMMERCIAL PAPER 3-MONTH (10/29)	5.31	5.34	7.84
CERTIFICATES OF DEPOSIT 3-MONTH (10/30)	5.26	5.34	7.95
EURODOLLAR 3-MONTH (10/26)	5.35	5.33	8.04

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipme
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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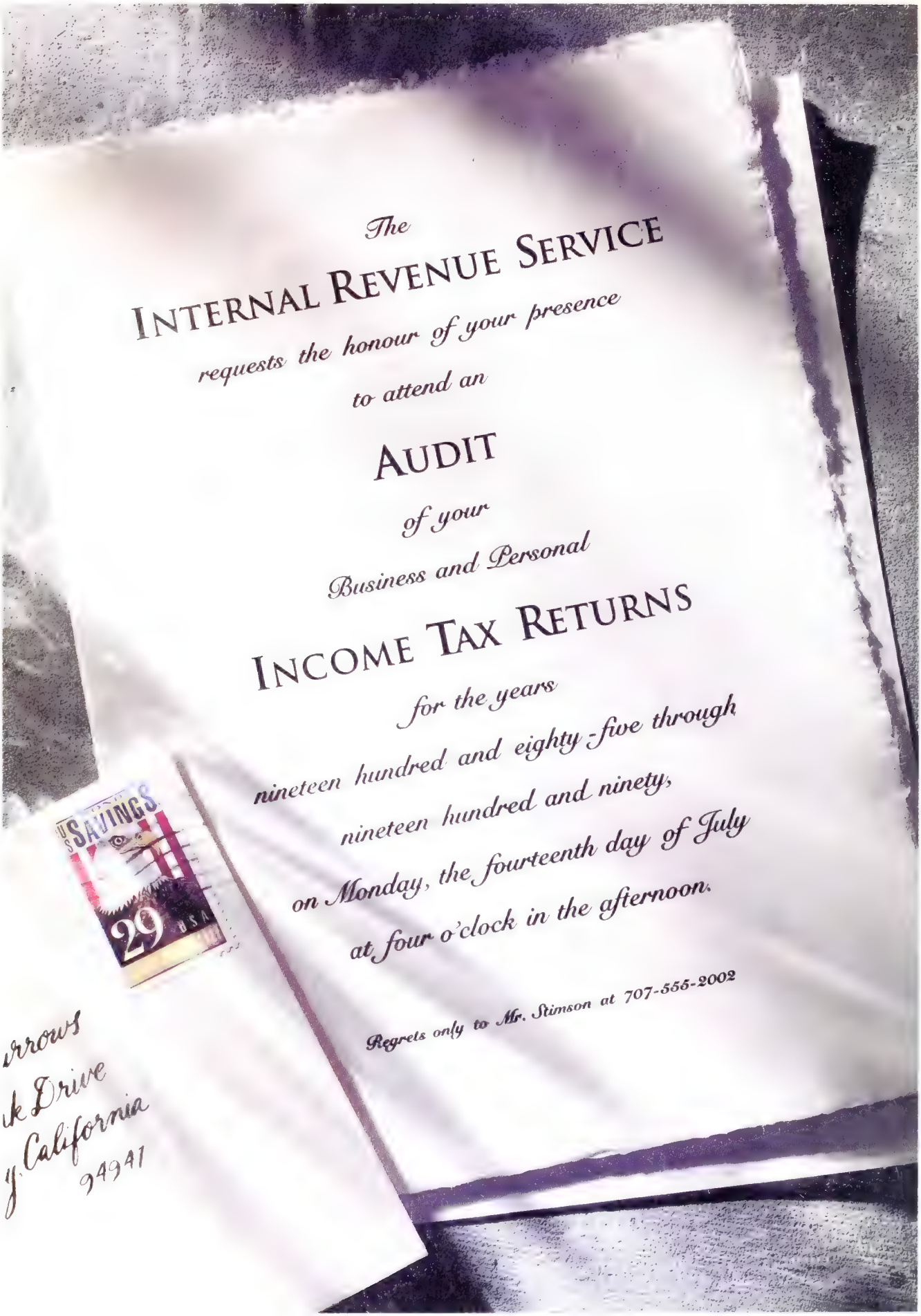

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Christopher Columbus

This is a tale of a man and a city. Because it's in Genoa, the capital of the Italian Riviera, that Christopher Columbus was born. Now, 500 years after he made history, Italy is welcoming him back home with a world - class celebration. From May 15th to August 15th 1992, Genoa will host the International Specialized Exhibition "Christopher Columbus: ships and the sea". Two fascinating themes, navigation and the sea, will be presented by many participating countries bringing together technology, ecology and culture into one spectacular vision. But there are more reasons to go to Genoa. The Exhibition will coincide with the rejuvenation of the historical city center, based on a vast project by Genoa - born Renzo Piano, one of the world's leading architects. Investing in the city's future, the restoration will give new life to the Old Harbour docks and warehouses, to which major new permanent facilities will be added. In particular, a number of important international meetings - some of them sponsored by the United Nations - will be held in the new Conference Cen-

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Readers Report

A VOTE OF CONFIDENCE FOR STOCK OPTIONS

My experiences at Pfizer in the early 1960s and as president of Genentech convince me that Professors Peter Cappelli and Joseph Blasi's cynicism about stock options for American employees is incorrect ("Offering employees stock options they can't refuse," Top of the News, Oct. 7).

Stock options for virtually all employees have been fundamental to the creation of the biotechnology industry. They are highly motivational and create significant company loyalty at all levels. Perhaps this cannot be measured by business school professors—but it certainly can by successful managers.

G. Kirk Raab
President & CEO
Genentech Inc.
South San Francisco

CONSOLIDATION'S EFFECTS ON AMERICA—AND WHIRLPOOL

What has historically repelled Americans about this kind of economic universe is its threat to American democracy and culture ("The Age of Consolidation," Cover Story, Oct. 14). Competition produces winners and thus is self-eliminating. This concentrates wealth and power, and that is the threat to American society. Concentrating economic power eliminates the influence of small property holders and reduces most Americans to the status of isolated, dependent workers. Postwar culture has eroded the power of Americans by changing them from active citizens to shoppers. If Americans have lost the instinct of workmanship, it is because this comes only from free choice.

R. E. Fauber
Sacramento

A square peg fits into a round hole about as well as Whirlpool fits your premise that global consolidation is unattractive and unproductive. Whirlpool's investment in Europe is a significant long-term strategy, not a short-term fling.

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Bruce Berger
Vice-President, Corporate Affairs
Whirlpool Corp.
Benton Harbor, Mich.

ISRAEL'S 'SICK ECONOMY': A SECOND OPINION

There is a wide consensus in Israel that making fundamental economic reforms is an important step for raising growth and productivity and for having an economically efficient absorption of the mass of new immigrants from the Soviet Union. We strongly reject, however your description of Israel as having a very sick economy ("Behind the headlines, a very sick economy," International Business, Oct. 7).

The public sector in Israel is indeed large. However, despite the heavy burden of defense, the size and main characteristics of the public sector in Israel do not differ markedly from those of several European countries, such as Germany, France, Sweden, the Netherlands, and Belgium. Moreover, in spite of an even higher degree of government intervention in the 1960s and early 1970s, Israel managed to have remarkably high rates of growth then.

Second, policymakers have been very explicit about the fact that the funds to be borrowed in international capital markets will be allocated to investments in infrastructure, housing, and in adjusting new immigrants' skills to a market economy. There is no intention to increase the size of the public sector with these funds. The government has also made it clear that it views the business sector as

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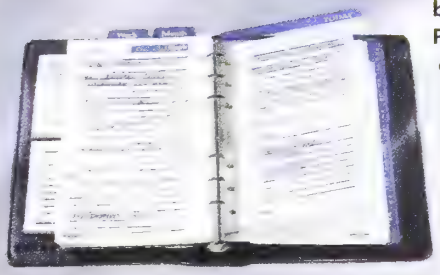
(HERE'S A HINT.)



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Readers Report

the key element in the absorption of im migrants to the labor force.

Third, it is unfortunate that your arti cle does not emphasize the remarkable human capital of the new immigrants. No country in recent history has re ceived, as new immigrants, so many sci entists, doctors, engineers, and othe highly skilled professionals as Israe these days.

Fourth, the fact that Israel manage to disinflate from inflation rates of ove 400% in the mid-1980s indicates that, de spite the many rigidities, the country i capable of making major economic ad justments at crucial junctions. The 198 stabilization program is a model pro gram that has guided many countries i Latin America and Eastern Europe.

Fifth, the Israeli corporate tax is no higher than in the U.S. (federal and state). Its founders, whose "socialis ideals" are emphasized in your story have made Israel a country where capi tal income is less heavily taxed than i most other countries, through specia low rates for dividends and interest, ex emptions for many forms of capita gains, etc.

Leonardo Leiderman
Efraim Sadka
Professors of Economics
Tel Avi

THREE CHEERS, ONE RAZZ FOR SIMPLER SOFTWARE

Object-oriented programming is a true revolution in the productivity of an industry that sorely needs it ("Software made simple," Cover Story, Sept. 30). While the cost of computer hardware has been steadily decreasing for the past 40 years, reducing the cost of computation by factors of millions, the cost of software has achieved a pro ductivity increase of, perhaps, a factor of 10. Object-oriented programming may in a single stroke allow an additional factor of 10.

Henry G. Baker
Encino, Calif

Your story did an excellent job ex plaining why current programming languages (such as C) are rapidly giving way to the improved reliability, clarity and reusability of object-oriented lan guages.

In attempting to demonstrate just how cryptic and error-prone computer programs can be, you may have done a better job than you realize—the one line of C code you chose to illustrate your point contains two mistakes. Instead of *printf("\n", curr_str)*, you probably meant to substitute a backslash for the slash and put in an underscore.

CORRECTIONS & CLARIFICATIONS

n "Fat pay checks got states and cit-es in deep hock . . . while federal em-ployees stayed ahead of the pack" Economic Trends, Sept. 23), we said hat average compensation received by ederal employees is higher than that f private-sector workers. This is mis-eading because the federal payroll loes not include retail and other low-vage workers common in the private ector. Moreover, data are inconclusive s to whether federal employees, on verage, registered higher wage-and-enefit increases during the 1980s.

These may not seem like cataclysmic rors, but they're more than enough to eep your program from doing what it's pposed to. Multiply those two bugs by e tens of thousands of lines often und in today's programs, and you can adily see why programmers welcome y technique that will help them reuse d programs, particularly when those rograms have already had the kinks orked out.

George Holober
Instructor, Training Services
Unix System Laboratories Inc.
Summit, N. J.

rogrammers and, particularly, pro-gramming managers should under-and that programs, like books, should e written so the readers will under-and what they read. After all, the nance of a programmer modifying a rogram he wrote is almost zero.

One good programming supervisor ho understands the true objective of andard program design can easily cut e programming expenses by 75%. owever, the number of these people n be counted on the fingers of one nd. Programming is a science, not an t. If we didn't do a better job in the nstruction industry than we do in most mputer projects, we would not have y buildings over two stories high. I ntirely agree with the objectives of odular programming, object-oriented rogramming, or any of the other names which functions or objects may be lled. What we need to do is stop talk-g about it and get control of the actual riting and design before we produce nother few billion lines of unmodifiable de.

W. Carl Gahan
Dallas

our articles, one on user interface and one on software development, a disservice by announcing solutions complex problems. In the story on mplified controls for consumer appli-nces such as VCRs, you gloss over the

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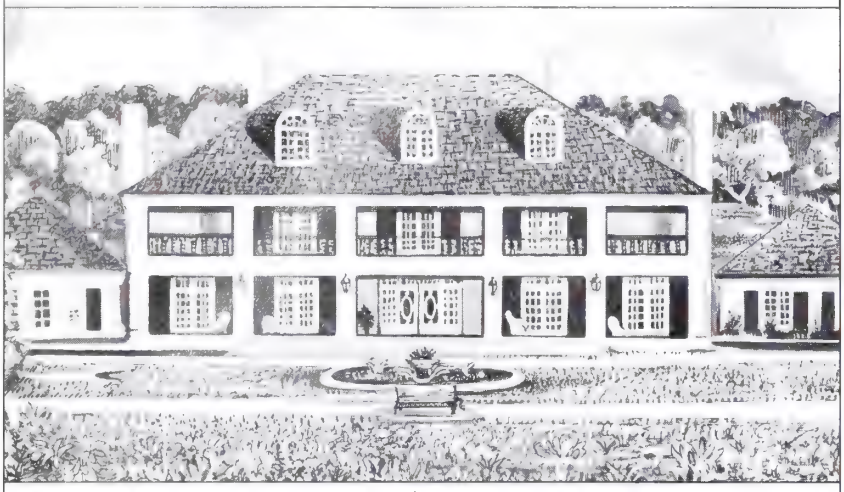

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Readers Report

fact that good (interface) engineering involves more than just limiting capabilities until products become trivial to use. While this is indeed a valid and often appropriate technique, the problem faced by product engineers is presenting the user with access to advanced capabilities in a way that makes them obvious without being trivial.

In a similar vein, the problems of developing software are not suddenly solved by the use of objects. Like structured programming, modular programming, programmer teams, data bases, relation data bases, and automatic programming (now called programming languages), object-oriented programming is yet another useful tool. But it doesn't magically solve all problems.

In other articles, you have explained that reengineering, or the process of rethinking a system as a whole, is much more effective than naive modeling. In contrast, this article advocates mimicking existing systems.

Robert Frankston
Newton Highlands, Mass.

'ME-ISM' WON'T CUT IT IN THE NEW MILLENNIUM

After reading dozens of your previous issues chock full of articles that lamented the "me-ism" of the 1980s and how it assisted in the erosion of our national competitiveness, I am confused by your apparent change in your editorial philosophy ("A career survival kit," Cover Story, Oct. 7).

Yes, all workers have the right to maximize their talents in a free marketplace, but certainly not at the expense of those enterprises that struggle daily to hold back the trade-deficit tide. I take issue with your conclusion that employee/employer relationships are necessarily zero-sum games. Your "career strategy" advice is one-dimensional and not any more inspired than the advice handed out by college placement offices in the 1950s.

If the past decade has taught us anything, it's that adversarial points of view are not only inconsistent with commercial efficiencies but also self-defeating at a time when our human resources should be focused on the competitive challenges of the new millennium.

Michael Murphy
President
CopyWorks Inc.
Grand Rapids, Mich.

Letters to the Editor should be sent to Readers Report, Business Week, 1221 Avenue of the Americas, New York, N. Y. 10020. Fax: (212) 512-4464. Telex: 12-7960, Intl. 4998204. All letters must include an address and daytime and evening telephone numbers. We reserve the right to edit letters for clarity and space.

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CHAIN REACTION: THE IMPACT OF RACE, RIGHTS, AND TAXES ON AMERICAN POLITICS
By Thomas Byrne Edsall with Mary D. Edsall
Norton • 339pp • $22.95

MINORITY PARTY: WHY DEMOCRATS FACE DEFEAT IN 1992 AND BEYOND
By Peter Brown
Regnery Gateway • 350pp • $21.95

PARTY OF THE PEOPLE? WHICH PEOPLE?

In 1985, a pollster named Stanley Greenberg gathered a group of white Democrats from suburban Detroit to talk about race and their party. The results, for traditional liberals, were shocking. This group of former loyalists was convinced their party had betrayed them. When Greenberg read a rousing quote from Robert Kennedy about the special obligation owed to blacks, the response was chilling. Replied one participant: "No wonder they killed him."

The message couldn't have been clearer. But the national party, including its Presidential contenders, never got it. Walter Mondale, Michael Dukakis, and Jesse Jackson kept singing the same old song—raise taxes, spend more for the poor, and press for such social engineering policies as busing and affirmative action. The result: The Democrats, who three decades ago dominated American politics, today are a nonfactor in Presidential elections. They survive in Congress only thanks to the powers of money and incumbency.

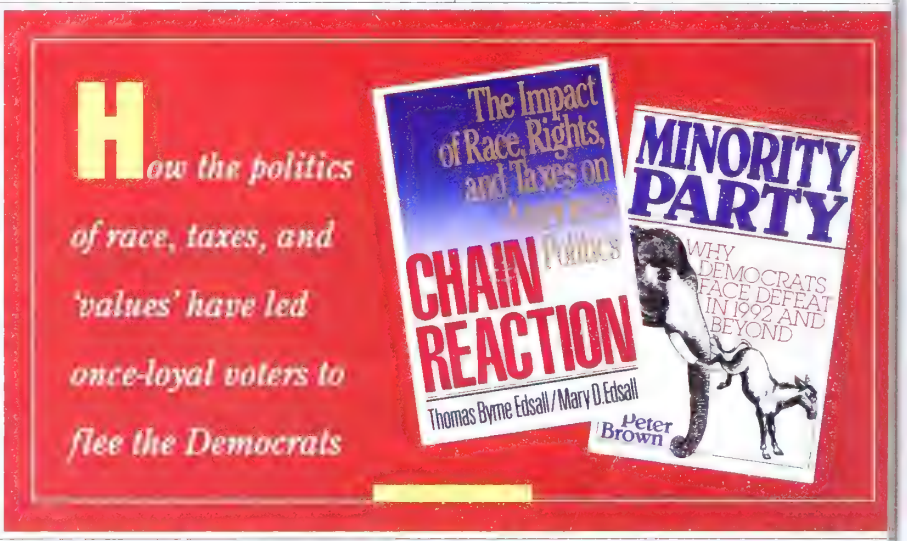
Two powerful new books—*Minority Party*, by Washington political reporter Peter Brown, and *Chain Reaction*, by *Washington Post* reporter Thomas Byrne Edsall and his wife, Mary D. Edsall—probe the Democrats' agony. Brown's is a journalistic look, taking readers into the homes of the middle-class suburbanites who are the key to contemporary politics. The Edsalls take a more historical and analytical view, exploring how the party became trapped in the confluence of changing race relations and economics. But their conclusions are strikingly similar: The politics of race, taxes, and what has become known as "values" have caused both traditional Democrats and up-for-grabs young suburbanites to reject the party's national candidates in droves.

The Edsalls offer a compelling chronicle of what went wrong. Democratic liberalism, they argue, reached its zenith in August, 1965, when President Lyndon B. Johnson signed into law the Voting Rights Act. A week later, Watts exploded in riots, and the peaceful struggle for equality faded from view, supplanted by images of black power, ghetto crime, welfare mothers, and drugs. Black spokesmen no longer demanded equal opportunity; they insisted on equal outcomes, which meant quotas and minority set-asides. For Northeastern cities, the bedrock of Democratic Party support, it meant busing. All the while, as the bill for poverty programs grew, middle-class voters watched rising taxes eat away at their stagnating incomes.

Republicans became adept at exploiting white resentment. Richard Nixon first tapped it with calls for "law and order." Ronald Reagan boosted his candidacy with his "welfare queen" rhetoric and a national tax revolt. And George Bush made black convict Willie Horton a symbol of Democratic permissiveness. The message was always the same: "It's them against us," the GOP told the white middle class, and the Democrats favored "them." It was a powerful message because it was in large part true, Brown and the Edsalls argue.

The Democratic Party did choose to become the representative of those who felt oppressed by society at large—poor blacks, radical feminists, and homosexual activists. And by doing so, the party implicitly rejected those labeled the oppressors: suburban middle-class whites. The party's moral stance may be worthy—that's the subject of another debate. But these books offer exceptionally blunt political analysis. There are, they observe, far more voters in the U. S. who fall under the label of oppressor than oppressed. And for the Democrats, that equation is an electoral disaster. Brown wants Democrats to write off the poor and focus instead on policies that "reward people for working." The Edsalls say the Democrats must face up to the divisive issue of race.

The Edsalls argue that liberal Democrats have gotten into trouble largely because the party has stifled dissent. Critics of redistributional economics or traditional welfare are labeled racists. Senator Daniel P. Moynihan (D-N. Y.) was denounced for a decade because in the 1960s he identified the troubled state of the black family. Even today, feminists vow to turn out of office not only those Democrats who voted for Clarence Thomas' nomination to the Supreme Court but even those who didn't oppose him loudly enough. Democratic liberals, write the Edsalls, "often barred from consideration legitimate issues for political discourse." Because most of the stifled criticism came from local party officials—those closest to the nation's real mood—the party lost touch with voters.



Brown tells of Geri Suma, a suburban homemaker married to an auto worker from Macomb County, Mich. In 1968 Suma supported Eugene McCarthy for President, but also worried about having her asthmatic son bused to a school miles away. "Busing made me begin to think the Democratic Party wasn't for us," says Suma, who began voting Republican. The Democrats have done nothing in the 23 years since to bring her back into the fold. And without Geri Suma and others like her, the Democratic Party will continue to lose.

Some of the party's latest crop of Presidential candidates, such as Arkansas Governor Bill Clinton, former Massachusetts Senator Paul Tsongas, and Virginia Governor L. Douglas Wilder, are searching for a message that can woo back the Geri Sumas. But the hard truth is that as long as the party's most identifiable personality—as recent poll

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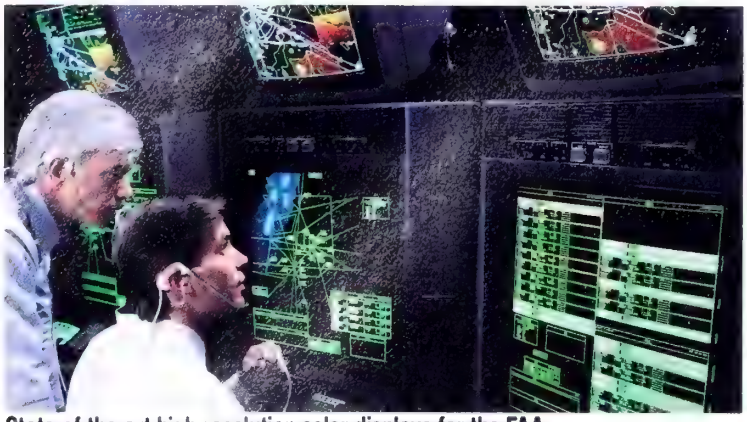

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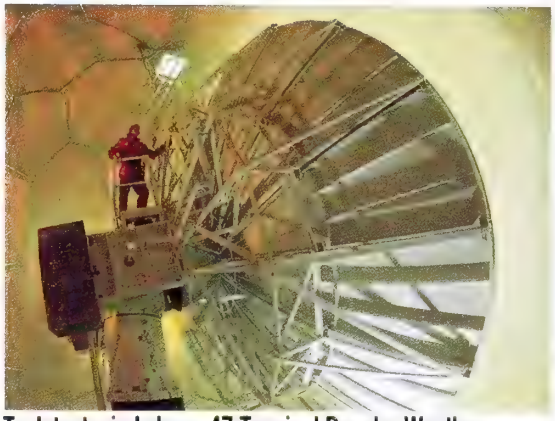

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International Herald Tribune

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show—is Jesse Jackson, the Democrats simply cannot win, given the nation's current political mood.

BY HOWARD GLECKMAN

Washington Correspondent Gleckman has written recently about tax policy and the politics of race.

BOOK BRIEFS

MILLENNIUM: WINNERS AND LOSERS IN THE COMING WORLD ORDER
By Jacques Attali
Times Books • 130pp • $17

FUTURE SHOCKER

Jacques Attali, president of the new $12 billion European Bank of Reconstruction & Development and longtime adviser to France's Francois Mitterrand, is a man of many ideas. Some are familiar, some involved, some outlandish. But a few are worth pondering. Fortunately, this is a slender volume, and impatient readers can skim the early sections and focus on the last three chapters. That's where the strangest—and best—of Attali's musings can be found.

Till then, he tells a mostly familiar tale: The age of bipolar superpowers is ending. America is in relative decline and Japan is the ascendant economic power. A stronger, expanding democratic Europe will vie with the Pacific Rim for economic leadership. Markets have triumphed, and the "central organizing principle of the future" will be economic.

But once Attali starts to explore the characteristics of the new world he envisions, his observations become biting. The chapter entitled "Millennial Losers," in spite of broad generalizations, makes a crucial point: For billions of people in the less-developed world, the new world order will be much like the old, only worse. In an age when information and knowledge are the raw materials for growth, more and more people will be left behind. Yet images are transmitted so freely around the globe that they will be painfully aware of what they cannot achieve. The result: inevitable conflict between the haves and the have-nots.

Attali's vision of how the more prosperous will live provides a chilling counterpoint. In "Nomadic Man," he depicts man in the "hyperindustrial" age equipped with technological tools that enable him to be at once productive and mobile. Ties with country, community and family will be easily severed. The individual will be self-sufficient and self-interested, able to flee and ignore the inequities around him. Attali's vision is bleak and overdrawn, but it is sufficiently grounded in reality to be troubling.

BY KAREN PENNAR

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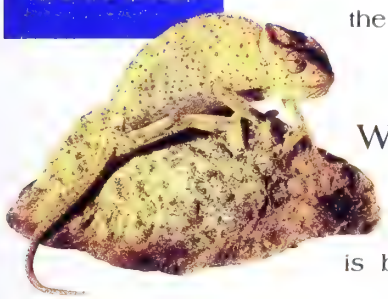

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HOW JAPAN PUTS THE 'HUMAN' IN HUMAN CAPITAL

BY ALAN S. BLINDER

To a degree that Americans would find astonishing, big Japanese companies are run for the benefit of employees rather than stockholders. That this leads to high productivity should not be surprising

ALAN S. BLINDER IS THE GORDON S. RENTSCHLER MEMORIAL PROFESSOR OF ECONOMICS AT PRINCETON AND THE AUTHOR OF *GROWING TOGETHER*

My last two columns on theories of the extraordinary dynamism of the Japanese economy concluded that industrial targeting was probably a major factor in the 1950s and 1960s, but much less so since, and that the unique relationships embodied in the production *keiretsu* are probably important even now. But I have saved what I believe to be Japan's real "secret" for last: The Japanese seem to have broken down the "us vs. them" barriers that so often impair labor relations in American and European companies. They do so by creating a feeling that employees and managers share a common fate. To paraphrase Lincoln, a well-run Japanese corporation is of, by, and for its people.

Of the employees: Finance-dominated capitalism too often forgets that a business organization is made up of people and can function no better than they do. The Japanese rarely forget this. Indeed, Japanese managers commonly believe that the company's employees, not its machines, are its most important assets and are therefore to be valued, nurtured, and—except in extremis—retained. So Japanese companies train their employees, see to their welfare, guarantee them job security, and offer career paths that blossom if the company flourishes.

American executives will tell you that it is risky and expensive to make large investments in employees who may soon resign or be laid off or to guarantee job security in a changing business world. They are right. But there are also benefits: A highly trained work force is more productive; a multiskilled work force is more flexible; employees with job security welcome rather than fear innovation.

By the employees: Japanese companies are certainly hierarchical—all that bowing means something. But they are, nonetheless, in a real sense run by their employees. Japanese CEOs are rarely dictators; many top companies are run by consensus. Work is organized into teams, from the executive suite to the factory floor. Important ideas and decisions bubble up from below at least as frequently as they come down from on high.

Consultation between labor and management is a pervasive practice in Japanese companies. Although employee participation is certainly not unknown in the U.S., it is much more widespread in Japan. Ordinary workers are encouraged to make on-the-spot decisions rather than check their brains at the door.

For the employees: It is said that Japanese workers are culturally disciplined, group-oriented, and hardworking. They probably are. But that cannot be the whole story. To a significant degree, Japanese workers cooperate with management because their welfare tied up with that of the company.

Modern economics identifies a serious i centive issue known as the principal-age problem. A familiar example arises when y hire an agent to sell your house. Will t agent act in your best interest or in her ow At least two major principal-agent proble arise with companies. First, how do corpora boards ensure that executives serve t interests of shareholders? Second, how managers get workers to put forth their be efforts?

American capitalism solves the first of the two problems beautifully. Huge stock optio and other financial incentives make the inte ests of executives and shareholders as on Should that approach fail, corporate raide stand ready to buy up companies whose sto market values are depressed by incompete or opportunistic management.

COMING TO AMERICA. The Japanese specialis in solving the second principal-agent pro lem—motivating the work force—by maki their employees both principals and agent To a degree that Americans would find a tonishing, large Japanese companies are r for the benefit of their employees rather th their stockholders. That means providing e tensive fringe benefits as well as the traini and job security I have already mentioned. means comparatively narrow pay differenti between executives and ordinary workers. means that managers begin their careers wi a stint on the factory floor. And it may al mean the aggressive pursuit of corpora growth, even when growth is unprofitable, guarantee job security and provide attracti career ladders for employees.

All these things and more convin Japanese workers that their companies a run for their benefit. When an employee Toyota thinks "us vs. them," "them" is m likely to be Nissan or General Motors th Toyota's management. That such beliefs le to high productivity should not be so amazi

These attitudes are, I think, slowly comi to America as profit-sharing and employee volvement spread and as command and cont give way to workplace cooperation. They a migrating from high-tech companies such IBM and Hewlett-Packard to old-line industr companies such as Corning and Ford. T word has traveled through Japanese tra plants, from the GM-Toyota joint venture California to GM's unconventional Saturn Co

It is in managing people, I believe, th America can learn the most from Japan. The is room for optimism but not for complacen for we have a long way to go.

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**Based on 6/30/91 AT&T Bell Labs test results

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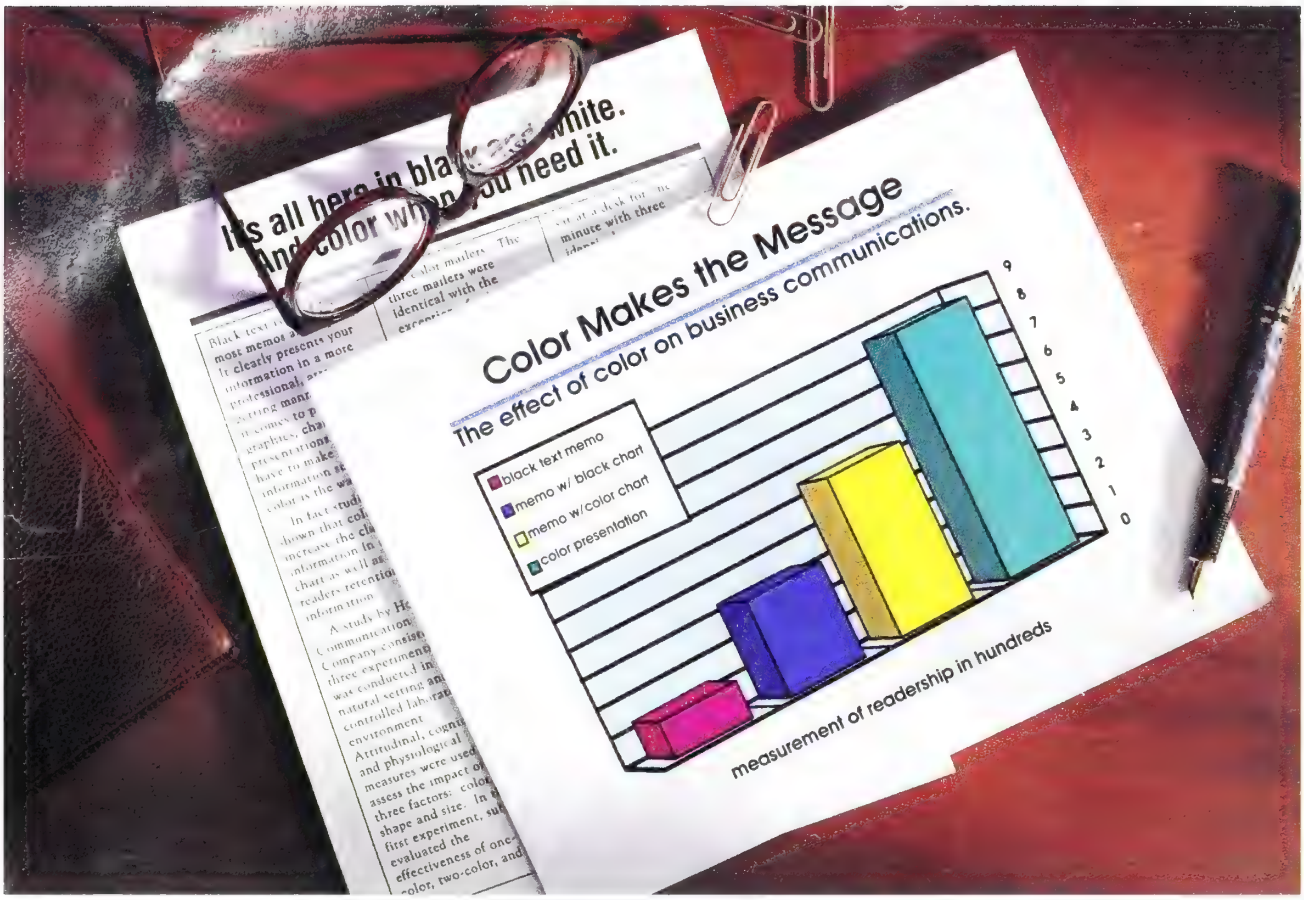

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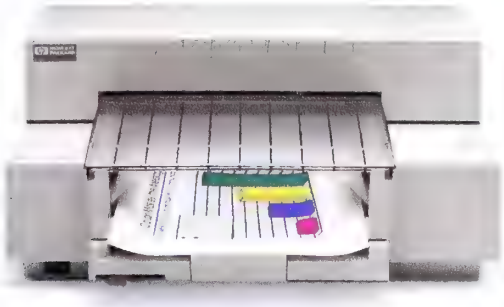

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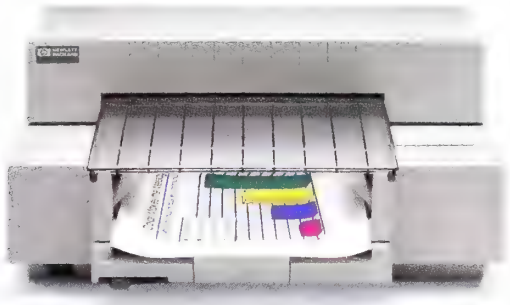

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BY GENE KORETZ

JOB WORRIES OBSCURE A LOOMING LABOR SHORTAGE . . .

Perhaps the most curious aspect of the economy's current performance lies in labor-market trends. Not only has employment been unusually weak—raising fears that the nascent recovery is faltering—but labor-force growth has been unusually slow. The latter trend, say Gert von der Linde and Richard Hokenson of Donaldson, Lufkin & Jenrette Securities Corp., points to a dramatic shift in the employment picture once business activity accelerates.

"Current anxiety about a shortage of jobs," says Hokenson, "could rapidly give way to concern about a shortage of qualified people to fill job openings."

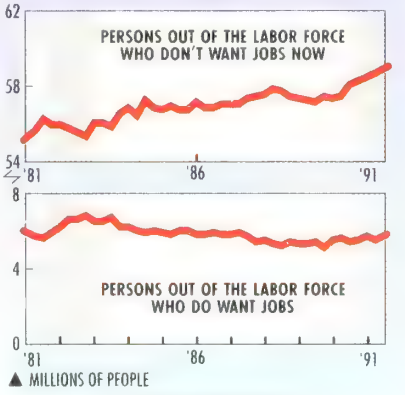
Since the economy slipped into recession in July of last year, note the two economists, the labor force has grown a mere 0.62%—roughly one-third as fast as it did after previous downturns began. And while slower growth of the working-age population is partly responsible, labor-force participation by Americans has also posted an unusual decline. Indeed, if labor-force growth had kept pace with the rise in the working-age population over the past 12 months, the labor force would now have over half a million more people, and unemployment would be far higher.

Not only has the number of people who are out of the labor force—those neither employed nor actively seeking work—posted an unusual rise but the number of such people who say they don't want a job has also risen sharply. By contrast, the number of people who are not seeking work but say they would like a job has risen only modestly since the middle of last year and has been declining on a long-run basis since the 1981-82 recession (chart).

People who say they don't want work cite such reasons as retirement, illness, disability, family responsibilities, and educational pursuits. What is unusual about the recent increase in their numbers, note von der Linde and Hokenson, is that it seems largely the result of "a sharp rise in voluntary and involuntary retirement by older and middle-aged male workers." (The numbers of people who say they are disabled, ill, or keeping house have actually declined.)

The lower number of people who say they want work implies that, when the economy finally turns up in earnest, there will be far fewer reentrants to the labor force than in past recoveries. It also suggests, says Hokenson, "that the unemployment rate could fall quickly in 1992 even if growth is modest—a development that might hearten politicians in an election year but could present big problems for business and policymakers as the expansion continues."

AN INCREASE IN PEOPLE WHO DON'T WANT WORK



DATA: BUREAU OF LABOR STATISTICS

. . . AND FEWER WORKERS COULD MEAN LATER RETIREMENT

Slow labor-force growth, combined with greater economic pressures on both business and older workers, will reverse the trend toward early retirement by the middle of this decade, predicts a new National Planning Assn. study. Companies will seek to retain older workers, says NPA economist Richard Belous, both to meet skill shortages and to lower pension plan costs. And public and private pension systems are both likely to move to later retirement provisions to keep such systems financially sound—exerting pressure on workers to stay on the job longer.

"By the year 2000," says Belous, "I expect the standard retirement age to have been pushed back from 65 to 68."

WHY CONSUMERS—AND BANKS—LOVE THEIR HOME-EQUITY LOANS

Though overall consumer borrowing has been slowing sharply, one kind of loan is taking off. Economist Gary Schlossberg of Wells Fargo Bank notes that home-equity and other second-mortgage borrowing rose at almost a $75 billion annual clip in the second quarter, three times its pace in late 1990. At large commercial banks, home-equity lines are up nearly 17% in the past year, while other consumer loans have declined.

Consumers favor home-equity borrowing, notes Schlossberg, because the rates are low—9% to 9.25% at most institutions, compared with 19% on credit cards—and the interest is tax-deductible. And banks like the action because it's far safer than other forms of lending. While the delinquency rate for most consumer loans rose for the fifth straight quarter, to 2.73% in the second quarter, the rate for home-equity loans actually dipped, to 0.9%.

A HINT OF RACISM AMONG TRADERS OF BASEBALL CARDS?

Recent studies of baseball players' salaries have indicated no difference between comparable black and white players' pay. But that doesn't mean discrimination has been eliminated from the game. In an intriguing study in the latest issue of *Economic Inquiry*, economists Torben Andersen of Red Deer College in Red Deer, Alta., and Sumner J. La Croix of the University of Hawaii analyze market prices of baseball cards to test for the existence of discriminatory attitudes among baseball fans.

The study looks at data regarding two samples: first, 1982 prices of cards issued in 1960 and 1961; and second, 1985 prices of cards issued in 1977. The analysis indicates that market prices of cards are higher for players with better performance records regardless of race but are generally lower for blacks.

While there is no significant difference between cards of black and white hitters from the early 1960s (a period of relatively few black players), cards of black hitters from the 1977 sample are priced lower at all performance levels, and the racial difference actually widens at the superstar level. Black pitchers from 1960-61 do generally worse than their white counterparts, though the few black superstars command higher prices. Prices of black pitcher cards from 1977 are higher than those of whites at average performance levels but rise less as performance improves, indicating that card collectors discriminate against above-average black pitchers.

The two economists conclude that some prejudice still afflicts many baseball fans. And since the collectors who influenced the 1985 prices for the 1977 card sample are probably young, they think it may take another generation before fan discrimination in baseball disappears.

1955.

1959.

1968.

1975.

1983.

1987.

1991.

You always come back to the basics.

[THE ANT]

It has long been assumed that things that are small aren't as powerful or sophisticated as things that are big. Of course, that just isn't true. Take the ant for instance. In spite of its small size, the ant is amazingly strong. Most ants can lift objects ten times heavier than their bodies. Some, very muscle-bound ants no doubt, can clean and jerk objects 50 times their body weight. To put that into proper perspective, that's like a man hoisting a sofa with 48 people and a small dog on it. But while the ant may seem like a miniature Hercules, don't forget he's also exceptionally smart. Ants are known to build nests up to 3 feet high and covering an area the size of a tennis court. Often these nests are complete with chambers for the Queens, nurseries for the young, living rooms and hallways in which to travel. Not bad considering most full-grown humans can't hook up a VCR. Now if you think the ant is pretty impressive, wait'll you read about the little mighty-mite on the next page.

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[THE RADICALLY NEW T2200SX]

Like the ant, small computers have often been considered underpowered pea brains. The new Toshiba T2200SX notebook should dispel that myth. Weighing a mere 5.5 pounds and taking up just half a briefcase, the T2200SX is so technologically advanced, it can crush computers ten times its size. Blessed with a 20MHz, 386SX microprocessor and a 60MB hard drive, the T2200SX delivers the performance of a world-class desktop PC. Yet, compare it to other notebooks and you'll see it's like an entirely different species. Quite simply, it feels bigger. Its keys are full-size, not cramped, and its LCD screen measures a full 9.5" diagonally. Combine this with a Nickel Hydride battery that lasts 3 hours per charge, a lightweight, incredibly durable carbon fiber reinforced case and features such as AutoResume and you have the first notebook with absolutely no compromises. To learn more about the mighty T2200SX, call 1-800-457-7777. Hopefully we've changed the way you look at small computers. Or, at the very least, changed the way you look at ants.

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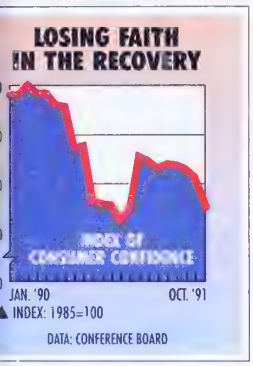
OVEMBER 11, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

THE WHITE HOUSE SPIN DOCTORS CAN'T HELP THIS PATIENT

The Bush Administration tried hard to put a smile on the Oct. 29 report on gross national product. The 2.4% gain in real GNP during the third quarter as the first advance in a year. Cabinet officials and taffers took turns proclaiming that the recession was ver and that the recovery was on solid ground.

Their words rang hollow almost immediately. Not long fter the GNP data came out, the Conference Board eported that consumer confidence in October plunged to level not seen since the Persian Gulf war (chart). learly, whatever the economy's gains were last quarter, ey were not sufficient to stem consumers' continuing ss of faith in the recovery. That means growth in the urth quarter is on shaky ground.



The bond market seemed to agree. It staged its largest single-day rally since Jan. 17, the day after the gulf war began. The market hammered the yield on 30-year Treasury bonds back to 7.9%, down from 8.1% only days earlier. The GNP gain was a bit below the market's modest expectation. Traders were especially encouraged by the report's exceptionally tame readgs on inflation, particularly when combined with the test news that labor costs continue to slow.

The GNP report—and the bond market's favorable rection—fueled speculation that a move by the Federal eserve Board to ease monetary policy was imminent. ndeed, on Oct. 30, the Fed did not drain reserves from he banking system at a time when federal funds—vernight borrowings between banks—were trading bew the central bank's target of 5¼%.

Most Fed-watchers saw this as a sign that the Fed as targeting a lower federal-funds rate, probably 5%, ased on its past tendency to make quarter-point moves. lower rate would help lessen the squeeze on bank nding, which Fed Chairman Alan Greenspan recently alled a "50-mph headwind" battering the recovery.

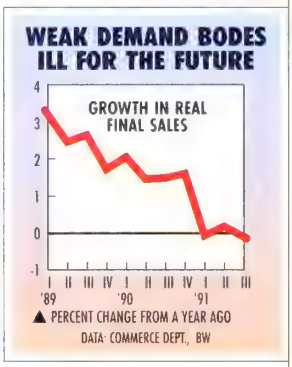
THERE'S JUST NOT MUCH DEMAND

With all due respect to the White House, the breakdown of last quarter's GNP data is not as encouraging as the 2.4% increase implies. Adjusted for inflation, that $24.2 illion gain comprises an $18.2 billion contribution from a lower pace of inventory liquidation and only a slim $6 illion rise in final sales of goods and services. The lack f much meaningful momentum in demand is the single largest roadblock to a sustainable recovery (chart).

Without more strength in final demand, businesses have little need to add to their inventories at a rate that will boost factory orders and production during the fourth quarter. Businesses cut inventories by $15.1 billion last quarter, compared with the $33.3 billion that they had pared in the second quarter. That slower pace of liquidation reflects the scattered inventory restocking that lifted factory output during the summer.

Continued lack of strength in final demand, however, is now causing those output gains to tail off. Manufacturers' new orders for durable goods fell 3.2% in September, the second consecutive drop after a big gain in July.

Domestic demand last quarter wasn't the problem. It rose by $26.2 billion, led by strong gains in consumer items, housing, and capital goods. Much of that spending, however, went for imports, while exports didn't grow. That means some of the recent inventory needs of businesses have been met by imports, at the expense of domestic output. The widening of the trade gap, from $12.6 billion in the second quarter to $32.8 billion in the third, cut $20.2 billion from GNP.



The trade deficit has had a stabilizing effect on this business cycle. Imports fell sharply during the recession, narrowing the trade gap, which limited the downturn's ravages. But on the upside of the cycle, the trade balance is now dampening the recovery, as imports return to their prerecession trend. Also, exports are slowing down as a result of sluggishness abroad. That makes U. S. producers more dependent on spending at home.

SHOPPERS SHAKE OUT PIGGY BANKS

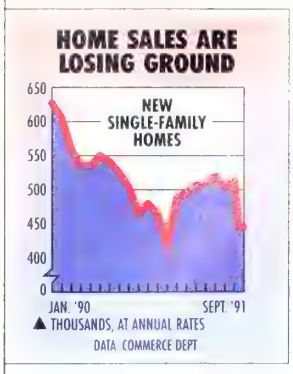
The problem for the fourth quarter is that domestic demand looks shaky. Housing is faltering, and consumers may be tapped out. Consumer spending, which accounts for two-thirds of overall demand, rose at an annual rate of 3.8% last quarter, but early signs in October suggest that consumers are cutting back.

In September, personal income, adjusted for taxes and inflation, rose only 0.2%, while spending increased by 0.6%. Higher auto sales contributed much of the spending gain, but car buying fell off sharply in October.

Consumers seem downright scared. The index of consumer confidence, which has declined steadily since June, fell a steep 12.5 points in October, to 60.4. Typical-

ERIC HOFFMAN/BW

ly, confidence drops that low only in a recession. Households expressed worries about both their present situation and their expectations for six months from now. And their assessment of employment conditions was the dreariest in more than eight years.



Adding to consumers' woes is a thin savings cushion. Spending this year has grown faster than income, causing households to save less at a time when debts are burdensome and job prospects are uncertain.

Concern over jobs and incomes may well derail the housing recovery. Despite the lowest mortgage rates in 14 years, sales of new single-family homes tumbled 12.9% in September, to an annual rate of 446,000 (chart). And the August gain, previously reported at 6.7%, was revised downward to only 1.8%. Weakening demand for cars and houses takes away two key props under the summer rebound in factory output.

KEEPING A TIGHT SQUEEZE ON PRICES

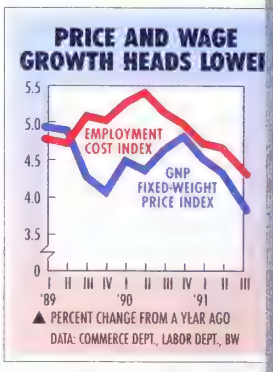
While the White House was trying to make a silk purse out of the sow's ear of GNP data, the Fed probably felt genuinely comfortable with the latest inflation numbers. Indeed, the drags on economic growth are the same forces pushing inflation lower. And amid slack job markets and sluggish demand, price increases should moderate even further in coming months.

In the third quarter, the GNP fixed-weight price index rose at an annual rate of just 2.1%. That was a drop from its 3.1% advance in the second quarter and was also the smallest increase in five years. The news was a salve for the bond market, after a surprisingly large rise in the September consumer price index a few days earlier.

In fact, much of the improvement came in the consumer sector, where prices rose at an annual rate of only 1.7%, down from 2.6% in the second quarter and 5.4% a year earlier. If consumers cut back on spending again, inflation is likely to slow even more, as companies hold the line on prices in order to drum up business.

Inflation should drop also because companies are getting some relief from rising costs, especially outlays for labor. In the year ended in September, compensation for civilian employees rose by 4.3%, down from 4.6% in the second quarter and 5% for all of 1990.

Benefits, which grew by 6% during the past year, continue to outpace wages, which are up just 3.8%. But for most industries, total compensation is growing much more slowly than a year ago. One exception is health care, where labor shortages are driving up salaries.



Compensation growth hit a six-year high in the middle of 1990 and has drifted lower since then. This has helped to lower the floor beneath price increases. And indeed, inflation, as measured by the GNP fixed-weight index, probably peaked at the end of last year (chart).

Moreover, wages should grow more slowly heading into 1992, maintaining the downward pressure on inflation. Sluggish hiring suggests that job seekers may accept pay cuts in order to find work. But that's a double-edged sword: With punier paychecks, consumers will have less to spend and little reason to feel optimistic about their economic future.

Still, fear of unemployment is the biggest concern for consumers. That's one reason the Bush Administration is trying to cast the best light possible on this economy. But if the recovery doesn't show more pep soon, even folks in the White House may start to worry about their jobs come next November.

THE WEEK AHEAD

PRODUCTIVITY

Tuesday, Nov. 5, 10 a.m.

Output per hour of work in the U.S. nonfarm economy likely increased at a respectable annual rate of 1.3% in the third quarter. If so, that would be productivity's best performance in more than a year. In the second quarter, productivity was up by just 0.7%. But in the third quarter, output seems to have grown much faster than total hours worked in the nonfarm business sector. Manufacturing probably continued to lead the efficiency gains. In the second quarter, factory productivity grew at a healthy 3.6% annual rate. The expected gain in output per work hour plus the moderate growth in employment costs suggest that unit labor costs in the nonfarm sector rose at an annual rate of about 3.5% in the third quarter, down from the 4.2% advance in both the first and second quarters.

CAR SALES

Tuesday, Nov. 5

New domestically made cars probably sold at an annual rate of just 6 million for all of October, down from 6.3 million in September. Car buying is expected to improve by the end of the month, according to economists surveyed by MMS International, a unit of McGraw-Hill Inc. In early October, however, sales were a disastrous 5.5 million. Plus, the sharp fall in consumer confidence last month suggests that few households were in a car-buying mood. The expected selling rate for October would push sales to their lowest since April.

INSTALLMENT CREDIT

Thursday, Nov. 7

Consumers probably cut an additional $ billion off their installment debt in September, say the MMS economists. In August, credit dropped $1.3 billion—the fourth consecutive decline. Auto credit was probably little changed in September, but it has been falling since March 1990. Revolving credit may post a decline in September, the first since January. That's suggested by September's sluggish retail sales outside of car buying and a sharp drop in personal loans at commercial banks.

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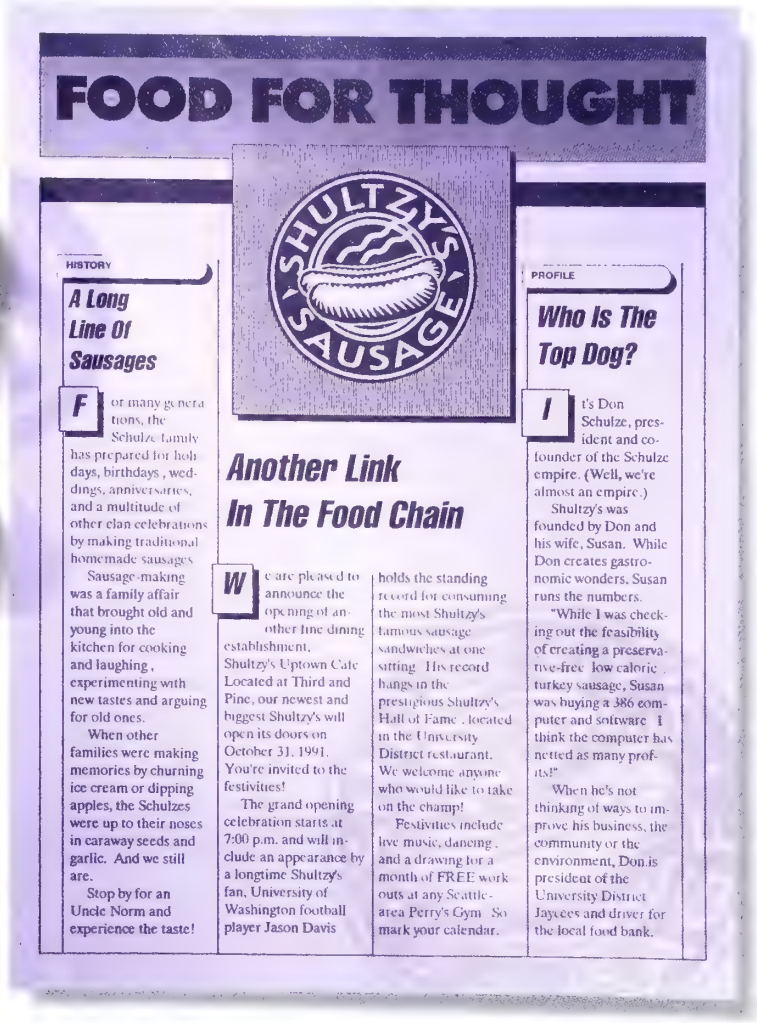

FOOD FOR THOUGHT

SHULTZY'S SAUSAGE

HISTORY

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When other families were making memories by churning ice cream or dipping apples, the Schulzes were up to their noses in caraway seeds and garlic. And we still are.

Stop by for an Uncle Norm and experience the taste!

Another Link In The Food Chain

We are pleased to announce the opening of another fine dining establishment, Shultzy's Uptown Cafe. Located at Third and Pine, our newest and biggest Shultzy's will open its doors on October 31, 1991. You're invited to the festivities!

The grand opening celebration starts at 7:00 p.m. and will include an appearance by a longtime Shultzy's fan, University of Washington football player Jason Davis holds the standing record for consuming the most Shultzy's famous sausage sandwiches at one sitting. His record hangs in the prestigious Shultzy's Hall of Fame, located in the University District restaurant. We welcome anyone who would like to take on the champ!

Festivities include live music, dancing, and a drawing for a month of FREE work outs at any Seattle-area Perry's Gym. So mark your calendar.

PROFILE

Who Is The Top Dog?

It's Don Schulze, president and co-founder of the Schulze empire. (Well, we're almost an empire.)

Shultzy's was founded by Don and his wife, Susan. While Don creates gastronomic wonders, Susan runs the numbers.

"While I was checking out the feasibility of creating a preservative-free, low caloric, turkey sausage, Susan was buying a 386 computer and software. I think the computer has netted as many profits!"

When he's not thinking of ways to improve his business, the community or the environment, Don is president of the University District Jaycees and driver for the local food bank.

In business it's important to look your best. Which is precisely why Don Schulze, owner of "Shultzy's" started using Microsoft® Publisher for Windows.™ You see, unlike all those other software applications, Publisher makes it easy to create professional quality publications.

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NOVEMBER 11, 1991

EASTERN: THE WINGS OF GREED

NOW, IT LOOKS AS IF THERE WILL BE ZILCH FOR THE FAILED AIRLINE'S CREDITORS

For more than a decade, Eastern Air Lines Inc. was plagued by seemingly unending woes, from incessant labor strife to lousy service and marketing. Fate hasn't been much kinder since the airline collapsed into Chapter 11 bankruptcy in March, 1989. The lawyers and bankers have raked off millions of dollars in fees. So has the law firm of David I. Shapiro, the court examiner who administered the bankruptcy. And Martin R. Shugrue Jr., the trustee appointed by the court to run Eastern, received a fat pay hike and has doled out high-paying jobs to longtime associates.

Eastern's plight has grown darker in recent weeks. Shugrue has been liquidating the airline's remaining assets ever since it stopped flying in January. But on Oct. 29, he agreed to a demand by unsecured creditors that Eastern be reclassified as Chapter 7, or liquidation, bankruptcy. Their reason: to curtail expenses and wind up all sales as quickly as possible. While this last-gasp step might help a little, it probably won't prevent Eastern from ending up as one of the few large bankruptcies in history that won't even have enough money left to pay off the lawyers. If that happens, unsecured creditors won't get a penny of the $2.2 billion they're owed (table).

Indeed, some creditors have given up any hope of repayment. "Airbus has long since concluded that Eastern is going to end up insolvent, and we have written off the $96 million we are owed," says Alan S. Boyd, chairman of Airbus Industrie of North America, a major creditor. And even those who still hope to recover just a fraction of what they're owed recognize that "a sneeze can blow it all away," says IBJ Schroder Senior Vice-President Mark Manski, chairman of the creditors' committee.

JUDICIAL DISCRETION. The Eastern mess is a commentary on the individuals running that case—and on the bankruptcy process as a whole. Bankruptcy law puts few limits on a judge's powers to run the show. But judges can't be experts in every line of business. As nonspecialists, they can be swayed by executives—such as Shugrue and former Eastern Chairman Frank Lorenzo—who want to keep going even when a successful reorganization becomes unlikely. In Eastern's

Judge Lifland let Eastern executives rack up nearly $2 billion in losses before liquidation

EASTERN'S DWINDLING RESOURCES

Federal Bankruptcy Judge Burton Lifland allowed Eastern trustee Martin Shugrue to withdraw $500 million from Eastern's cash account to fund operating costs. When the airline stopped flying in January, unsecured creditors found there was precious little money left to protect their investment. And the value of Eastern's assets, as even Shugrue admits, is dropping by the day

	VALUE/MO.
ASSETS	
• Escrow and other funds	$24
• Unsold gates, spare parts, planes, etc.	37
• TOTAL	$62
PRIORITY LIABILITIES	
• Lawyers' and bankers' fees, salaries for some 1,200 employees still working	$38
• Secured creditors' claims, ticket refunds, and back-pay awards	16
• TOTAL	$55
• *Funds available to cover other liabilities*	
OTHER LIABILITIES	
• Disputed claims that would supersede unsecured claims if upheld in court	$46
• Unsecured creditors' claims	2,25
• TOTAL	$2,7

DATA: EASTERN BANKRUPTCY FILINGS, BW

ase, the judge, Burton R. Lifland, vhose pro-management leanings are videly known, allowed the two men to ack up nearly $2 billion in losses before he company was forced into liquidation.

While Lifland declined to comment, hugrue strongly defends his stewardhip and insists the creditors will get at east something. "We've done as well as ould be expected, given the circumtances," he says. "We have delivered a afe and orderly liquidation of the assets." But critics say otherwise. "The roblem is that Eastern started selling ff assets too late," says Mark Roe, a aw professor at Columbia University vho specializes in bankruptcy. "And hat happened because the bankruptcy ode gives the judge a lot of discretion." Roe suggests that the law should be hanged to limit how long a company an attempt to reorganize before it must e liquidated.

The House Judiciary Committee may onsider just such a change. Capitol Hill ources say that on Nov. 6, the committee, spurred by Eastern and other cases, vill begin hearings on the role of trustees in bankruptcy cases.

The Eastern bankruptcy saga began n March, 1989, when then-chairman Lorenzo tossed the company into Chapter 11 fter a showdown with its unions. Lorenzo, who was determined to break the nions' strike, insisted that he could restore Eastern to profitability if given enough time—and money. Every few months, he would submit projections on when the carrier would turn the corner. Creditors complained each one proved to be wildly off base.

WASTED DOLLARS. That didn't seem to bother Lifland. Early in the bankruptcy, the judge said that getting Eastern flying again was in the "public interest" and outweighed the "parochial" concerns of other parties. Having committed himself to that goal, Lifland allowed Lorenzo to sell assets and use the proceeds to keep Eastern flying. True, unsecured creditors put up little resistance to Lorenzo at first. But in early 1990, they finally demanded his ouster. Although the judge ultimately listened, Lorenzo had burned up $1.2 billion by then.

Early in the bankruptcy, the judge said getting Eastern flying again was in the 'public interest'

Lifland allowed Shugrue to do the same thing. When the former Pan American World Airways Inc. vice-chairman took over as trustee in April, 1990, skeptics gave Eastern little chance of surviving. Nonetheless, Shugrue launched another expensive program to restore the carrier to health. He spent about $35 million on national TV ads featuring himself as the leader of a new Eastern. And he spent a bundle to offer business flyers first-class seats for the price of an unrestricted coach fare. Eastern added new leather seats to many of its planes and expanded their first-class cabins. The primary goal: to steal full-fare passengers away from rival carriers with better reputations for service, such as Delta Air Lines Inc.

The creditors thought Shugrue's program was as much a waste of money as Lorenzo's efforts had been. And when the gulf crisis slowed air travel and sent fuel prices through the roof, it became obvious that Eastern couldn't make it. Finally, Lifland agreed to shut it down for good on Jan. 18, 1991. Shugrue dismisses the criticisms as "Monday-morning quarterbacking" and says that the creditors already were getting so little that the attempt to keep Eastern aloft was worth the risk if it could save jobs. But his gamble resulted in an additional $530 million in operating losses. "His ego got in the way of sound decision-making," says one member of the creditors' committee. Shugrue calls such criticism "a cheap shot."

Judging from his actions, Shugrue

O'S SMILING? ASSET LES MAY NOT EVEN VER ADVISERS' FEES

Shugrue, calling his turnaround efforts 'extremely successful,' sought a $175,000 raise—and got it

(L TO R) PHOTOGRAPH BY ANN J. STATES/SABA MICHAEL HIRSCH/GAMMA LIAISON

had a high opinion of his work before the shutdown. On Dec. 20, 1990, he filed a motion with Lifland to increase his salary from $425,000 a year to $600,000, retroactive to the day he took over. Shugrue's reasoning: His pay should be in line with that of American Airlines Inc. Chairman Robert R. Crandall and United Air Lines Inc. President Stephen M. Wolf—the industry's two most successful executives. Shugrue also argued that his turnaround effort had "been extremely successful."

Was it? Airlines usually book tickets at least six weeks in advance. So Shugrue should have had a fairly good idea in late December that January seats weren't selling well. Indeed, he already had drawn up an elaborate liquidation plan. "He had to know [in December] that the airline was shutting down the next month," says James L. Linsey, a lawyer for Eastern's pilots' union. Nonetheless, Shugrue says that he didn't decide on the shutdown until the day it happened.

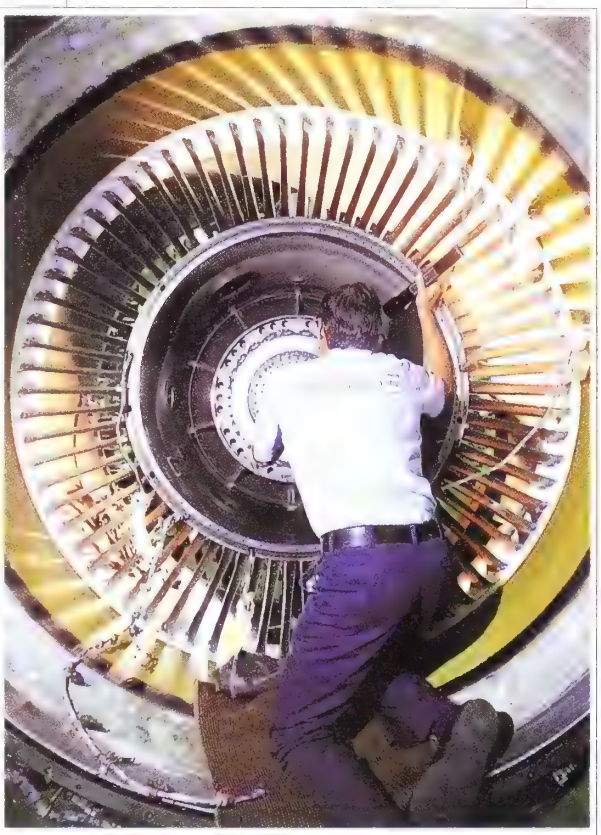
BIG BONUS. What's more, Shugrue rammed through his salary request in a week over the Christmas holidays. Copies of his motion were sent to only four people, among them creditors' committee lawyer Joel B. Zweibel, who was out of town. Lifland not only didn't object, he set a hearing for Dec. 27. Since no one objected, he O. K.'d the request. "I was out of the office on vacation until Dec. 27," says Zweibel. Shugrue says the request was "an end-of-the-year thing" and concedes that it "may have been" known to only a few participants.

Shugrue has been equally generous with the executives he has hired. A month before the shutdown, he brought in Robert J. Gould, a former associate from Pan Am. Gould's job: to be Eastern's president at $350,000 a year, plus a $150,000 "signing bonus"—and a $350,000 golden parachute.

Shugrue also has hired numerous consultants to handle various tasks, including selling airplanes and handling administration. The consultants are on retainers, but even the creditors' committee isn't sure how much some of them are being paid. Shugrue says he "brought in people whose reputations I knew, who could get up to speed quickly." Still, Shugrue might not have needed Gould's high-priced expertise in running an airline, for instance, if he had foreseen that Eastern would shut down several weeks later.

Shugrue's team has succeeded in selling more than $700 million in assets, such as planes, routes, and gates. But one hire badly bungled the initial attempt to sell commuter airline Bar Harbor Airways Inc. In mid-1990, Shugrue wanted to expand Bar Harbor's Florida routes to feed passengers to Eastern's Miami hub. Creditors objected, but Lifland gave Shugrue the go-ahead.

Shugrue installed yet another colleague, Jack E. Robinson III, as Bar Harbor's president. But by October, 1990, Bar Harbor was losing more money than ever, and its creditors demanded a sale. Robinson arranged an auction in New York. As the auction got under way, Eastern's attorneys say they discovered that Robinson planned to throw in with one of the three bidders that had shown up. The lawyers objected to the apparent conflict of interest, and the auction collapsed. Shugrue asked for Robinson's resignation. Bar Harbor filed for bankruptcy in January, 1991, after Eastern's attempts to sell the airline proved fruitless. Robinson, who la attempted to buy Bar Harbor, insis "I did not make a bid until after resigned."



BREAKDOWN: LAWSUITS COULD DRAIN ALL REMAINING CASH

Some are profiting from Eastern's demise: As of June, its longtime law firm had collected $16.4 million

'UNDER WATER.' The creditors are unlik ly to see any money when Shugrue done. "The joke going around is that should just abandon the rest of the a sets, because it's costing more to dispo of them than [Shugrue] is likely to g from selling them," says one credit representative. For his part, Shugru concedes that "there is upside p tential and downside risks b cause we're dealing with th world of estimates." But he i sists that Eastern will wind u solvent.

That's an optimistic scenar based on Shugrue's most rece liquidation analysis. A differe interpretation of the same nu bers could come up with a muc more gloomy result. Shugrues submission shows that $68.6 mi lion will be left for creditors the end of the day. Howeve Eastern's pilots' union just won case on an estimated $75 millio in wages due strikers. Dad County, which includes Eastern maintenance base in Miami, is su ing Eastern for up to $116 millio in environmental damages to M ami airport. And aircraft lessor are suing for $270 million on var ous grounds. Shugrue assume that all three—plus any othe suits that might be filed—won wind up costing Eastern mor than $70 million. If they turn ou to cost more, "we would be wa under water," says one credito representative.

Plenty of others, however, al ready have profited from Eastern's slov demise. Weil, Gotshal & Manges, one o Lorenzo's longtime law firms that Shu grue has kept on, has billed Eastern fo a total of $22 million since March, 1989 It had collected $16.4 million as of June according to court documents. Shapiro the examiner whom Lifland kept on as special adviser after Shugrue was ap pointed, and his law firm, Dickstein, Sha piro & Morin, took home $7 million fo their services. All told, the lawyers an other advisers have billed Eastern fo $86 million. As of June, they had collect ed $67 million.

That's money in the bank. Meanwhile whatever Judge Lifland decides from here on out, Eastern's creditors will nev er see more than a pittance of what they're owed.

By Aaron Bernstein and Michael Oneal in New York and Gail DeGeorge in Miami, with Seth Payne in Washington

NION HIRING HALL IN CALIFORNIA: THE STATE PROJECTS A LOSS OF 380,000 JOBS THIS YEAR

S THE UPTURN TANKS, TATES GET BRUISED—AGAIN

wer jobs and lower tax receipts have new deficits looming nationwide

The shirtsleeved auto salesmen at the Vasek Polak dealership in Hermosa Beach, Calif., had a hectic ptember. Cut-rate loans and other ne-ons had worked. After a long, lonespell, the crowds returned to kick the es of Porsches and BMWs. Sales med, very nearly reaching the 120 s a month the dealership sold in its day a few years back. But in Octo, the clutch slipped. "We'll be lucky if sell 50 cars this month," frets Fince Manager Andrew Ruffner. "This the worst month we've ever had."

From Hermosa Beach to Hampton ys, early optimism about the recesn's end is being rudely crushed. The ns of economic re- ery last summer—a kup in home sales in ifornia, a brief surge new manufacturing ers back East, and proved retail sales in rts of New Enand—did help boost ss national product % in the third quar. But that gain is hisy, and now the econy may be dipping ew (page 31).

The problems are parularly acute in state pitals, where goverrs and rank-and-file government workers are bracing for trouble. Layoffs and slower business activity keep rippling through the states' economies, eroding tax collections. At the same time, the jobless are turning to the states for unemployment and welfare programs, boosting states' spending. "Costs are rising well above inflation," observes Brian Roherty, executive director of the National Association of State Budget Officers. "At the same time, revenues are very weak." The upshot: deficits and pressure to cut more state and local government jobs.

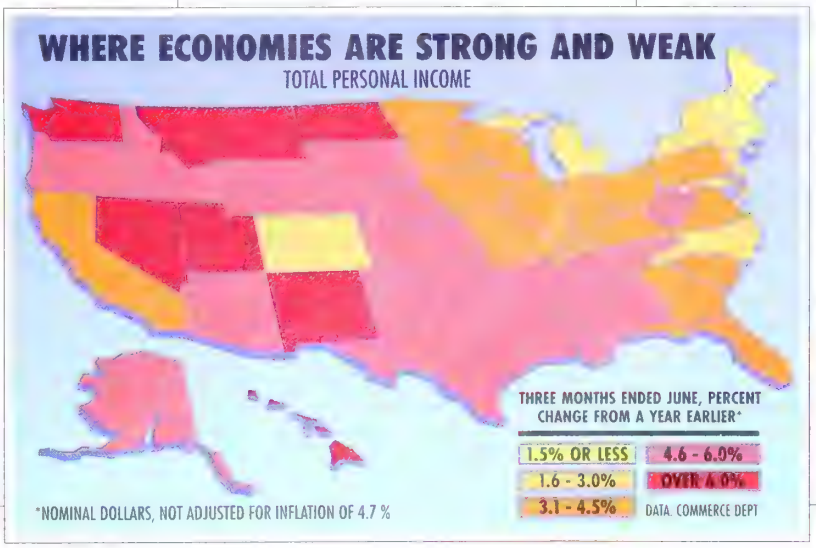
That dismal arithmetic is why Massachusetts, with a $300 million gap in its $12.9 billion budget, is mulling an early-retirement program for 6,000 state workers. In California, budget estimators had projected a loss of 35,000 jobs this year. But they failed to include layoffs by hundreds of small construction and service outfits dotting the state. Those pushed the number of lost jobs to 380,000. Only last June, the state closed a $14.3 billion shortfall. Sacramento now predicts an additional $3 billion gap in the fiscal year that ends next June.

SHORTFALLS. True, some spots on the map show signs of vigor. On Wall Street, the long downturn in the stock and bond business appears over. Hiring is up. But part of the reason is that firms are gearing up to handle a wave of restructurings and bankruptcies.

The broader trend is far less hopeful. Across the nation, economies have been growing sluggishly, if at all (map). A fresh $689 million budget gap is looming in New York. The Empire State reckons that it underestimated by 103,000 the number of jobs it's losing. In Michigan, unemployment climbed to 9.2% in September from 8.6% in July, with the loss of 48,000 jobs in a state that had made modest gains through much of the spring. Florida projects a new $622 million shortfall just seven months after cutting $1 billion from the budget. The legislature is being called into special session to figure out what to do. Even in Washington State, which has lived high off Boeing Co.'s good fortune, Governor Booth Gardner was caught short in September. Lower revenue forecasts showed a need to cut $244 million from Washington's $15.3 billion budget.

In different places, different industries are hurting. In New York, it's continued layoffs in the banking, legal, advertising, and publishing industries. New rounds of layoffs in the defense and computer industries continue to hit Massachusetts as well as California. And most everywhere, retailing—and the sales taxes retailers take in—are down. The Conference Board's index of consumer confidence sank in October to recessionary levels. Even as winter nears, New Englanders seem slow to buy cold-weather clothes, reports Jim Anathan, president of Filene's Basement Inc. in Wellesley, Mass.

All this recessionary behavior comes as a sharp change from summertime, when the economy was perking up. Last August, the Federal Reserve Bank of Philadelphia found that 47% of manufacturers it surveyed in southern New Jersey, east-



ern Pennsylvania, and Delaware reported an increase in new orders. By October, however, that number had slumped to 20%. "A lot of companies are doing so much cutting that they are almost forcing themselves out of business," says Fred Sands, president of Los Angeles-based Fred Sands Realtors. "It's 80% psychological."

Sometimes, it's far more than that. The restructuring and consolidations of many industries continue, and with them go thousands of jobs. In Detroit, for example, Comerica Inc. is planning to merge with Manufacturers National Corp. in a deal that eventually will eliminate 1,800 jobs. Down in Houston, Tenneco Inc. on Oct. 29 said it would lay off 3,000 employees in a restructuring.

FADING GLOW. Nowhere is the problem more pronounced than in the Golden State, which keeps losing its luster. Look on Rodeo Drive in Beverly Hills, where empty retail space mars the usual glow of outsize prosperity. Then there's California's huge home-building industry. It posted modest gains last spring but now is in a tailspin. Housing starts in August, the most recent statistic available, sank 32% below last year's level, to less than half the rate seen through most of the 1980s. Or consider the recently announced merger of banking giants Bank of America and Security Pacific Corp.: It's estimated to mean 10,000 layoffs in 1992.

Adjusting to the decline in defense spending may be the hardest part of this recession for California's 32 million people, so many of whom lived one way or another off the Pentagon. The 70,000 aerospace jobs lost in the past four years could swell by at least 40,000 more by the end of 1992 following President Bush's decision to scale back nuclear weapons deployment, according to David Hensley at the University of California at Los Angeles' Business Forecasting Project. Nor is commercial aviation taking up the slack: McDonnell Douglas Corp. on Oct. 25 said it wouldn't locate a plant for its new MD-12 jetliner in the state. "There's no source of growth in sight for the state at all," says Hensley.

One business that does find itself expanding is Cal Corn Inc. Cal Corn? It's a little outfit based in Irvine, Calif., whose 13 popcorn and candy shops are enjoying increased traffic at their locations inside shopping malls. Good for Cal Corn, but a far cry from selling autos, houses, and jumbo jets. In state after state, residents can only hope the rest of the economy starts popping, too.

By Eric Schine in Hermosa Beach, Calif., with Gary McWilliams in Boston, Joseph Weber in Philadelphia, and bureau reports

Commentary/by Rose Brady and Deborah Stead

IF YELTSIN ISN'T SERIOUS, HE'S IN SERIOUS TROUBLE

It sounded all too familiar: When Russian President Boris N. Yeltsin announced his newest economic program on Oct. 28, he recited a litany of reforms heard almost since Mikhail Gorbachev launched *perestroika* in 1986: Prices will be liberalized, factories privatized, and the ruble strengthened. No wonder Russians and Westerners alike reacted skeptically.

Yet, after many false starts, there are strong signs that the latest program is the real thing. The reason: Yeltsin is running out of time. In the two months since the failed coup, he has frittered away much of the enormous stash of goodwill garnered when he faced down the tanks. In the post-coup disarray, shortages of food and goods have become worse. Riots could explode in large cities by spring, when food stocks are drawn down. Yeltsin knows that if he doesn't take decisive steps now, conditions may be ripe within six months or so for hard-liners to step in—through a second coup or even legitimate elections.

DOWN AND OUT: SPRING SHORTAGES COULD GIVE HARD-LINERS A BOOST

RIVALS POISED. Despite his bravery, Yeltsin is politically vulnerable. Thousands of disgruntled communists who lost their jobs in the post-coup backlash are waiting in the wings, ready to grab power should the democrats fail to set the economy straight. Many are in provincial cities and farm regions barely touched by *glasnost* or *perestroika*.

Perhaps the most dangerous is Vladimir Zhirinovsky, president of the Liberal Democratic Party and a proponent of a militaristic brand of Russian imperialism. Although dismissed by many as a buffoon, Zhirinovsky stunned liberals in June by winning 6 million votes and third place in Russia's presidential elections. Now, he predicts he'll be legally elected as either Russian or Soviet leader by next spring, when h says an economic collapse will promp emergency elections. His platform pure authoritarianism, including strong Russian army with more an better conventional and nuclear arms "By spring, the country will be on th verge of civil war," Zhirinovsky said o Oct. 30. "A new regime will come t power. Then there will be order."

To head off suc challenges, Yeltsin i vowing stern me sures. By quickly lib eralizing prices an slashing subsidies he hopes to get th worst over in si months. That coul be a pipe dream, bu Yeltsin is laying hi job on the line. In stead of appointing prime minister, h has decided to ru the Russian govern ment himself, leav ing no scapegoat i the policy fails.

NO NETS. To be success, Yeltsin wi have to abandon hi trusty populist pos tions. In the past, h promised market-economy reforms But he would hamstring them with ex pensive safety nets, such as a wage indexing scheme. If he's serious, tha will have to go. Living standards wil decline sharply. Prices for almost ev erything but oil and bread will likel triple or quadruple overnight. To b sure, Yeltsin and his advisers see th shock therapy as a way to land th elusive Western aid he has long sought. But he's being motivated mor by internal than external concerns.

In Moscow grocery stores, shopper seem ready for the shock. Says Stani slav Golovin, a 22-year-old engineering student, as he stands in line at a sho on Novy Arbat Street: "At first, it wil be hard, but there is no other way t come to the market. People will ge used to it." That's optimistic. Signs are that Yeltsin, more than anyone, under stands he can't depend on the infinite patience of the Russian people.

MAYBE THE MIDEAST JUST CAN'T AFFORD TO KEEP FIGHTING

esperate economic needs are giving peace a chance in Madrid

AMIR AND GORBACHEV: ISRAEL BADLY WANTS FUNDS TO SETTLE 350,000 SOVIET JEWS

As the opening act of the Arab-Israeli Peace Conference got under way at Madrid's Palacio Real, e main participants had something ry important in common. Israel, Syria, rdan, Lebanon, and the Palestinians e all grappling with daunting economic allenges ranging from huge inflows of fugees to cutoffs of foreign aid.

Economics played a key role in the ddle East's last major breakthrough 1977, when Egypt's virtual bankrupt- helped propel Anwar Sadat on his storic flight to Jerusalem. This time, , dismal economic performance is put- g pressure on the politicians. Middle stern leaders are increasingly aware at they need capital and technical aid om the West, yet they can't compete r it unless the political climate im- oves. "No one is going to put 10¢ into at region until it stabilizes," says J. R. inader, president of the Na- nal U. S.-Arab Chamber of mmerce in Washington. here has to be a sense of secu- y; that's what all the leaders e driving for."

STITUTE. Israel's presence at e negotiating table owes a eat deal to its scramble to find nds to settle the 350,000 Soviet ws who already have arrived d the tens of thousands likely follow. Prime Minister Yitzhak Shamir has asked the U. S. to guarantee $10 billion in loans that would go toward new housing, but the Bush Administration has held up approval until after the peace talks have started. Easing tensions with the Arabs would also help Shamir cut the $7.2 billion defense budget and free up more money for domestic spending, just as other Mideast goverments could (table). Israeli leaders now realize that sizable inflows of private investment, also needed to absorb the immigrants, will only be forthcoming with a brighter political picture. "Everyone understands now that with regional stability Israel would be a much more attractive place to invest," says Jacob A. Frenkel, governor of the Bank of Israel.

Economic pressures are also forcing the Palestinians to relax their resolve. Arab residents of the occupied West Bank and Gaza strip have been hit hard by the disruptions of the *intifada* uprising. They're also hurting from the cutoff of some $400 million in foreign aid and workers' remittances from Saudi Arabia and Kuwait, which are punishing Yasser Arafat's pro-Iraq stand. The resulting hardships are pushing the leadership in the occupied territories to urge the Palestinian Liberation Organization to temper its demands for full-fledged statehood. "The people inside are much more pragmatic about pursuing peace," says George Abed, an influential Palestinian economist who heads the Welfare Assn., a Geneva-based foundation that aids Palestinians. "They need to stop the increase in poverty and unemployment."

MONEY TALKS. The rich countries of the Persian Gulf have also been punishing Jordan for its pro-Iraq stance. Saudi Arabia and others have cut off hundreds of millions of dollars per year in financial aid. At the same time, Jordan faces its own huge influx of refugees in the form of more than 180,000 Palestinians expelled from Saudi Arabia and Kuwait, as well as some 200,000 Iraqis. They are swamping schools and other social services. King Hussein's advisers are hoping that Jordan's eager cooperation in the talks will translate into development aid and U. S. pressure on the Saudis to ease up. The strategy may have led the Saudis to recently reopen their borders to Jordanian exports.

Chances are slight that political movement in Madrid will be rewarded with multibillion-dollar aid programs like those that flowed to Egypt and Israel after the 1979 Camp David accord. One reason: Congress seems unlikely to ante up big sums. Subtler economic incentives aimed at the private sector are more likely. The U. S. could give a big boost to Syrian President Hafez al-Assad's recent efforts to bring in Western companies by taking Syria off the list of countries said to sponsor terrorism. Such a move would open the way for Export-Import Bank financing of sales to Syria, where several U. S. corporations, including Boeing and AT&T, see potential. Washington could also pressure the Arabs to end their embargo of Israel, and it could help both Syria and Jordan in their pleas for aid from the World Bank and International Monetary Fund.

The mere start of talks has cheered executives in the region. "The peace conference is going to have a major impact on the business environment," says Dov Frohman, managing director of Intel Israel Ltd. in Jerusalem. The question is whether modern economic interests can overcome centuries-old political enmities.

By John Rossant in Jerusalem and Stanley Reed in New York

MIDEAST PEACE: THE ECONOMIC POTENTIAL

	Population Millions	Gross domestic product per capita	Defense spending per capita
ISRAEL	4.8	$10,600	$1,277
OCCUPIED TERRITORIES	1.7	700	NA
JORDAN	4.3	879	137
SYRIA	12.8	716	126
LEBANON	2.6	1,129	53

NA = Not applicable

DATA: WORLD BANK, INTERNATIONAL INSTITUTE FOR STRATEGIC STUDIES, BW

AP WIDE WORLD

POLITICS

TERM LIMITS: POPULAR REVOLT OR EXTREMIST CRUSADE?

The movement's big money comes from rich, far-right individuals

On Nov. 5, Washington State will vote on Initiative 553, a term-limit referendum that would force its eight U. S. House members, including Speaker Thomas S. Foley, to retire in 1994. Polls suggest voters, fed up with reports of political corruption, are likely to approve limits.

Term limits are sweeping the country, but Washington's provisions would be the stiffest so far. A new Colorado law takes effect in 1997 for House and Senate members, and provisions in California and Oklahoma affect only state and local officeholders. Another 20 states are likely to vote on similar measures next year. Supporters like to portray their movement as a spontaneous uprising pitting ordinary Americans against entrenched incumbents bankrolled by special interests. Indeed, term-limit foes depend heavily on funding from large corporations, big labor, and an assortment of interest groups.

'SECRET AGENDA.' But reality doesn't bear out the populist myth. The term-limit crusade may have begun as a citizens' movement. But it has been taken over by big money. Nearly all of the $650,000 spent in support of Initiative 553 has come from a single Washington (D. C.)-based group called Citizens for Congressional Reform. CCR has given $600,000 in cash, staff support, and advertising, according to CCR records.

Where does the group get its money? Director Mary Ann Best says CCR relies on its 200,000 members. The average contribution is under $15, she claims. But CCR got its seed money—about $400,000—from brothers Charles G. and David H. Koch, chairman and executive vice-president, respectively, of Koch Industries Inc., a privately held, diversified energy company in Wichita.

The Koch brothers have long been active in political causes. In 1980, David Koch was the Libertarian Party's Vice-Presidential candidate. That party's platform calls for radically reducing the role of government and ending most U. S. involvement abroad. Koch says he's no longer involved with the Libertarians and is focusing his efforts on term limits. "Incumbents extract money from the Treasury for their districts just to support their reelection," he says.

> Meanwhile, the foes of term limits are being funded by big business and labor

CCR's tax returns, which the group made available to BUSINESS WEEK, list Koch's Wichita offices as the place where CCR's books are kept. Best says CCR is nonpartisan and that its only agenda is term limits and "accountable government." Yet CCR is a spin-off of another tax-exempt organization, Citizens for a Sound Economy, a conservative group that espouses tax cuts and privatization of federal programs. Its director: James C. Miller III, a budget director under President Reagan.

Best insists that the two organizations have severed all legal and financial ties. But a visit to CCR's headquarters indicates otherwise. The two groups occupy offices on the same floor, two of CCR's directors are also on Miller's board, and CCR press releases list a contact whose salary is paid by Citizens for a Sound Economy. "This is an out-of-state movement with a secret agenda," declares Representative Al Swift (D-Wash.). "It's the brainchild of a small group of very rich, very extreme citizens."

REPUBLICAN PLOT? Naturally, Democrats suspect the movement is a Republican plot to break their hold on Congress. At least one term-limit organization gives the theory some credence. Americans to Limit Congressional Terms is run from the offices of Eddie Mahe & Co., a Washington GOP consulting firm. Rent, overhead, and staff are paid by Mahe, whose direct-mail expertise also is tapped to solicit donations.

Opponents don't have rich individual backers, but they're getting plenty of business and labor money. In Washington State, nearly all of the $300,000 raised by those trying to defeat Initiative 553 came from such companies as Philip Morris ($25,000), Kaiser Aluminum ($15,000), and Boeing ($10,000). The National Rifle Assn. and the Association of Trial Lawyers of America gave $10,000 each. Labor organizations chipped in $49,000. "Big business doesn't like what we're doing," says CCR's Best. "You're talking about taking away their investment on Capitol Hill."

Pols are watching Washington closely and not just because Speaker Foley's future is at stake. Recent polls show that 70% of voters nationwide support limits, and a victory in the Northwest might make the movement unstoppable. With the stakes so high, it's no surprise that what began as a grass-roots uprising has become a big-money brawl.

By Paula Dwyer in Washington, with Dori Jones Yang in Seattle

OMPAQ'S NEW BOSS DOESN'T EVEN AVE TIME TO WINCE

kkhard Pfeiffer must stop the profit losses and heal raw wounds

The tension inside Compaq Computer's boardroom was excruciating. As the late afternoon wore into ening, Rod Canion, the engineer who nded the personal-computer power- use nearly 10 years ago, was undergo- what amounted to a job interview, iently answering one question after ther from directors. At stake was his as chief executive. Down the hall, a ordinate he had hired awaited his n to make his own pitch for the post. By 10 p.m., about two hours after he t the room, Canion heard the verdict: was out. "I was sur- sed," he says. "But I ve to take a realistic view. was the board's decision." ose directors sav the Oct. meeting, which came one y after Compaq an- nced a \$70 million loss d its first-ever layoffs, s wrenching. "It was the ghest business decision e ever made," says Com- q Chairman Benjamin M. sen.

NCIVILIZED.' Canion's re- acement is 50-year-old ief Operating Officer khard Pfeiffer, who built e company's fledgling Eu- ean unit into a \$1.8 bil- n operation before Canion mmoned him to Houston t January. Pfeiffer's sud- n triumph over Canion s stunning. "They may ve needed change," says Michael S. avely, former president of Compaq rth America, who quit when Pfeiffer s promoted to COO, "but this was un- ilized and uncalled-for."

The news captivated Houston and the mputer industry. Indeed, within hours the Oct. 25 announcement, local TV ws crews hovered above Compaq's uston headquarters in helicopters, oting videotape for the nightly news. rvels one worker: "It was like Liz ylor's wedding or something."

Canion's fall was actually far less amorous. His departure came after eks of high-level wrangling aimed at lling the company out of a six-month cline in revenues, profits, and market are. A month ago, after Canion had led to respond to the problems with a arp enough recovery strategy, Rosen stepped in. Their solution, devised with Pfeiffer's help, was to reorganize the company into two units: plain-vanilla PCs and more sophisticated computer systems. The plan would allow the company's desktops and portable computers to slug it out with the lower-cost clones that cause many of Compaq's problems while transferring the research-intensive costs of more powerful computers to a separate unit.

Talks broke down over how to split top management duties. Canion was willing to share his job, creating two CEO positions. But Rosen wouldn't go for it, and Pfeiffer wanted to be No. 1. On Oct. 23, Rosen told directors that the two men would audition for the No. 1 slot at the next day's board meeting.

In the end, says Rosen, the board was won over by Pfeiffer's experience in the brutally competitive semiconductor and consumer-electronic markets—and his willingness to shake up Compaq. Says Rosen: "The first thing Eckhard did when he got to Houston was question why we were doing things the way we were."

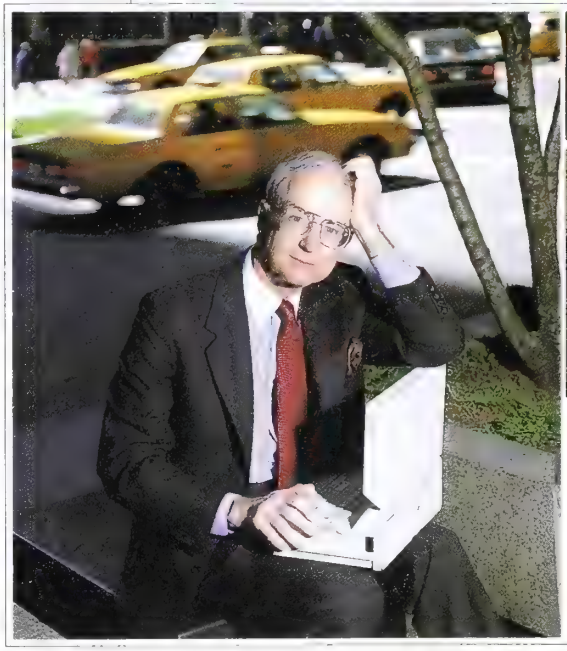
Pfeiffer, a German whose family fled across war-torn Europe in 1944 to settle in Nuremberg, spent much of his career at Texas Instruments Corp., where Canion also got his start. Pfeiffer might have stayed there had it not been for a 1983 call from Rosen, who told him that tiny Compaq needed someone to launch its European operation. Pfeiffer jumped at the chance.

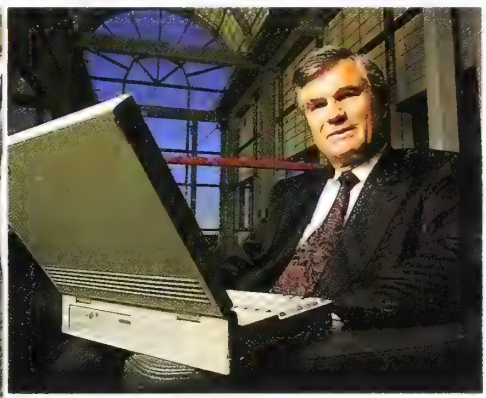
Now, Pfeiffer must get a handle on Compaq's problems. "He's able to guide through turbulent situations," says Charles M. Clough, who was Pfeiffer's boss in Germany and is now chairman of Wyle Laboratories, a chip company. "He's a take-charge guy." Insiders say Pfeiffer is fine-tuning a broad comeback plan that includes negotiating better prices from component suppliers, farming out some manufacturing, and forcing much deeper cost-cutting.

DOLDRUMS. Perhaps the most important change Pfeiffer must make is to accelerate the pace of new-product introductions. One of Compaq's major problems in 1991 was its dearth of new computers—the company announced no major machines from October, 1990, to September, 1991. Pfeiffer now says that Compaq will hit the showrooms quickly with sexy new computers that can expand its markets. Coming up: a color notebook computer and a portable that can recognize handwriting. "We've got great technology resources and a new base to move from," says Pfeiffer. "But we have to move faster. And we have to look at attacking issues differently."

Obviously, things are going to be very different at Compaq without Canion. Some half-dozen top executives are planning to resign, and the planned layoffs will trim 12% of Compaq's 12,000 workers. Canion is on sabbatical. He says he plans to make a comeback eventually with another startup, though he cautions that "I probably won't be doing much in PCs." After the October that he's had, who could blame him?

By Mark Ivey in Houston, with Deidre A. Depke and Thane Peterson in New York





Rosen and Pfeiffer: After the announcement, TV news helicopters hovered over Compaq. 'It was like Liz Taylor's wedding,' said an employee

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THE LAW

SCHULER WANTS ABBOTT TO PAY UP FOR LOST JOB CHANCES

YOU'LL NEVER EAT LUNCH IN THIS INDUSTRY AGAIN

A court case at Abbott fans the fire over 'noncompete' agreements

Suppose a longtime executive is squeezed out. He's angry. Will he spill details about his former employer if he lands a job with a rival? Possibly. How, then, does a company protect its secrets without seriously impairing the former employee's ability to find a job in the industry he knows best?

It's not a hypothetical question. It's the crux of an ongoing 10-month battle between Abbott Laboratories and former President and Chief Operating Officer Jack W. Schuler. On Oct. 28, a Cook County (Ill.) Circuit Court judge blessed a deal in which Abbott said it wouldn't sue to enforce its agreement barring him from working for a competitor. The pact, entered two days before the case against the giant health care company was set for trial, averted a call to the witness stand for Abbott Chairman Duane L. Burnham and Borg-Warner Corp. Chairman James F. Bere, the Abbott director who negotiated Schuler's severance.

'BE REASONABLE.' But Schuler is likely to seek damages for lost job opportunities because of provisions Abbott now agrees were "unenforceable." The two could settle, but they'll likely slug it out in court. "The ruling is powerful support for a damage claim," says George F. Galland Jr., Schuler's lawyer. Abbott declines to comment.

However it's resolved, the case underscores a tough issue for all employers in this era of white-collar layoffs and executive mobility: how to protect hard-won client lists and trade secrets while avoiding costly suits. For employees, whose careers can be blighted by an unjust "noncompete" clause, the issue is crucial. Now, the agreements—and suits attacking them—are almost routine. "More and more companies are using noncompetes," says Michael A. Epstein, an intellectual-property lawyer. "If you try to enforce an overly broad noncompete agreement, it could end up hurting you. Be reasonable" (table).

While standards vary by state, being reasonable generally means limiting the time and territory covered and protecting legitimate business interests. Last year, a Philadelphia court let Pentech Infusions Inc. stop a former nursing-services director from working for a rival because its business depended on protecting confidential data and client relations. It also found the dur tion (12 months) and scope (a 100-mi radius from Philadelphia) reasonable.

Trouble is, the law is evolving. 1987, the Texas Supreme Court barre noncompete agreements "which are pr marily designed to limit competition restrain the right to engage in a cor mon calling." But the court didn't defi a "common calling." The ensuing cha led to a law spelling out what was re sonable, largely at business' request.

What's more, the cases are ofte sticky. GTE Corp. and John D. Goeke the founder of GTE-owned Airfone, feu ed for 25 months over a noncompet agreement before settling last Marc Goeken says GTE agreed to pay $15 million to him and Airfone's other orig nal owners. Goeken agreed to drop h Federal Communications Commission p tition seeking to deny GTE a license f air-to-ground phone service.

SIGN OR ELSE. Was Abbott's agreemer with Schuler reasonable? Probably no It barred Schuler from working for cor petitors anywhere in the world for s years—about twice what most court have upheld. Judge Edwin M. Berma interpreted Abbott's decision not to e force the clause after two years as "a admission that it was too far-reaching. In court documents, Schuler claims if h didn't sign the agreement, he woul have gotten no severance. More impo tant, he says he signed only after Ber an Abbott director, assured him that th board would be flexible about whic companies were "competitive." Ber couldn't be reached for comment. I court, Abbott denied any assurances.

Schuler sued Abbott in Decembe 1990, after his stock options had veste asking the court to void the noncompet clause. At issue was whether Abbo was serving a legitimate business inte est by blocking Schuler's employmer with competitors fo six years. His lawye argued that even tw years after leaving Ab bott, he had no secret

The dispute is chil ing Abbott execs. "It' disturbing that th board could force on of the country's to health care executive out of his job and the fight to keep him fro going back to work, says one. But if Schu ler wrings damage from Abbott, it coul catch a chill of its own

By Julia Flynn Sile in Chicago, with Wend Zellner in Dallas

THE LAW ON 'NONCOMPETE' AGREEMENTS

Standards vary from state to state, but the courts have found noncompetitive agreements lawful and enforceable when they:

- Specify a reasonable time, usually six months to three years
- Define an area, anywhere from an adjoining county to the continental U.S., depending on the nature of the business
- Detail the types of work that are prohibited
- Protect a legitimate business interest of the employer

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PEOPLE

A REVERSAL OF MISFORTUNE?

Alan Dershowitz is trying to shred a best-selling Milken exposé

Alan M. Dershowitz would like nothing better than to rename *Den of Thieves*, the new best-seller about jailed junk-bond czar Michael R. Milken. The brash Harvard law professor and Milken lawyer would call it *Den of Thieves: Pack of Lies.*

Dershowitz is campaigning to make his wish come true—if not in bookstores, then in the public's mind. He has placed newspaper ads blasting the book as "chock full of demonstrable errors." In speeches, Dershowitz is slamming author James B. Stewart, the *Wall Street Journal*'s Pulitzer prize-winning front page editor. Soon, Dershowitz says, he'll hand out a 100-page "briefing book" rebutting Stewart's portrayal of Milken as a greedy criminal.

WINNING HEARTS. Stewart says the assault shows the might of the Milken public relations machine, which his book blasts. "It's meant to intimidate all journalists who might write about Milken," he says. "The facts are on my side." But Dershowitz says he fears *Den* will go down as the definitive Milken book. "We're competing for the hearts and minds of the general public," he says.

A subtext in the argument is whether Dershowitz and, as he claims, Stewart, are angling to win the heart and mind of U.S. District Court Judge Kimba M. Wood. After Milken pleaded guilty to six felonies in April, 1990, she sentenced him to 10 years. Now, she is mulling whether to grant his appeal for a reduced jail term.

Milken has admitted securities manipulation and tax fraud. Yet Dershowitz, who won a reversal of socialite Claus von Bulow's murder conviction and has his own current bestseller, *Chutzpah*, says Stewart "convicted" Milken of crimes he didn't commit. *Den*, he claims, takes as true allegations by the likes of stock cheat Ivan F. Boesky, even though the allegations were never tested in court.

DERSHOWITZ: "APPALLED" BY *DEN OF THIEVES*' FLAWS

AUTHOR STEWART: "THE FACTS ARE ON MY SIDE"

Dershowitz got a preview of *Den* last summer, soon after Milken hired him. He says he was "appalled" by its untruths. The fireworks started in October, after the *Journal* ran excerpts. Dershowitz penned a biting op-ed piece for the *Journal*, which also carried Stewart's reply and their rebuttals.

'MR. BIG.' Dershowitz turned to other fronts after *The New York Times* ran a swooning book review. His full-page *Times* ad attacked *Den*'s "religious stereotypes" and reviewer Michael M. Thomas as anti-Semitic. (Stewart scoffs at the claim, and Thomas has slammed Dershowitz in his *New York Observer* column.) Meantime, Dershowitz challenged Stewart to a debate.

Dershowitz claims Stewart and publisher Simon & Schuster Inc. timed *Den* to coincide with a "critical legal event": Milken's sentencing appeal. "Stewart created the myth of Michael Milken as Mr. Big," Dershowitz told BUSINESS WEEK. "He wants Milken to have a very long sentence." Stewart and his editor, Alice Mayhew, say the claims are hogwash. The book appeared now because that's when they finished it. And in publishing, new titles come out in the spring and fall seasons.

Stewart rests his case on *Den*, but thinks it's Dershowitz who seeks to sway the judge, something Dershowitz denies. On Oct. 17, Milken's lawyers asked for a reduction from the 36 to 40 months in time Wood indicated he should serve before parole. Could Wood, who has total discretion to cut Milken's term, be swayed? New York defense lawyer Stanley S. Arkin notes: "It takes a rare judge not to be influenced to some extent by what's happening in the community." But John C. Coffee, a Columbia Law School professor, says such an effort could offend Wood and backfire.

Meanwhile, Milken sits in a four-man cell at a minimum-security prison in Pleasanton, Calif. He tutors inmates. On weekends, his family visits. One day, friends say, Milken will print his own story. Right now, it's Stewart's version that's topping the *Times* bestseller list.

By Michele Galen in New York

ENVIRONMENT

HERE COME THE GREENMOBILES

Eastern states join the rally fo cleaner cars. Will it work?

If you've been expecting electric an other alternatively fueled cars to h the roads about the time your grea grandchildren start to drive, think agai On Oct. 29, alternative vehicles got the biggest boost yet, when nine Easter states and the District of Columb promised to adopt tough new smog-r duction rules first imposed by Californ in September, 1990. The states are Ne York, New Jersey, Pennsylvania, Mass chusetts, Virginia, Maryland, Delawar New Hampshire, and Maine.

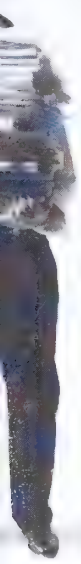
With other states, including Illinoi Texas, and Oregon, mulling simila moves, it seems almost certain th large numbers of new U.S. cars an trucks will have to run on natural gas methanol starting in 1997. On top that, the new rules mandate that 1998, 2% of all new vehicles will have t run on electricity. That will hit 10% 2003, or nearly 500,000 annually in state that have agreed to the rules so far.

Big car and oil companies are alread griping that it can't—and shouldn't—b done. David R. Hayward, Mobil O Corp.'s vice-president for supply an transportation, calls the new rules "dr conian and expensive, especially the ele tric-vehicle requirement." Companie fear alternative vehicles won't sell wit out big government incentives. The ele tric-car requirement aside, they hop most of the new clean-air rules can b met by making gasoline burn mor cleanly and by improving convention fuel systems. Yet they complain it wi cost them "tens of billions of dollars."

PARKING PERKS. All this, the manufa turers claim, could add up to $550 to th cost of a new car. State officials put th tab at closer to $170. And the companie question whether the California rule will be effective in cleaning up smog i the East, where weather and pollutio sources are different. "It's going to be mess, and [we] really question whethe it's going to be worth the trip," say Donald R. Buist, Ford Motor Co.'s dire tor of automotive emissions and fu economy.

Backers concede that much remains t be done to make alternative vehicle practical. States expect eventually t pass incentives—such as lower sales ta es and special parking privileges in u

VOICE!



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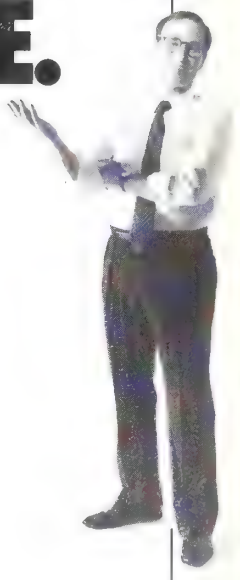

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WANG OFFICES THAT WORK

ban centers—to lure consumers. But George P. Ferreri, director of air management for the Maryland Environment Dept., admits that "the details haven't been worked out." Thomas C. Jorling, New York's environment commissioner, says his state is focusing on getting public utilities to build enough natural-gas refueling and electric recharging stations so that consumers will be able to "use these vehicles in the real world."

QUICKER CHARGES. So far, though, few such stations exist—a major problem, given the short driving range of most alternative vehicles. The best prototype so far, General Motors Corp.'s Impact, travels a maximum of 120 miles per charge. The East Coast states also hope to charge up all the new electric vehicles they're promoting with no increase in electric-generating capacity. That will require incentives to get drivers to charge up overnight, when other demand on power plants is low.

The wild card is how fast companies can improve alternative-vehicle technology. Every major car company in the world has an electric-car project under way. In October, Detroit's Big Three agreed to pour $260 million into new batteries that will give electric cars longer range—with the U.S. government kicking in half the dough. One promising new battery, called sodium-sulphur, may be ready by the mid-1990s. Also in October, in Japan, the Ministry of International Trade & Industry announced a similar program to come up with electric batteries with more oomph.

State officials are counting on competition to make their new regulations practical. If Detroit's Big Three don't plunge ahead, "they're going to lose tremendous amounts of market share to foreign manufacturers who aren't so reluctant to market" alternative cars, New York's Jorling predicts. For instance, Nissan Motor Corp. recently announced that it has come up with a charger that can partially juice up electric-car batteries in as little as 15 minutes—vs. up to 8 hours for current models. With an early lead in alternative-fuel technology, Detroit isn't about to let that happen without a fight. And although Detroit's battery consortium is just cranking up, GM has hinted it will put the Impact into production by the mid-1990s using conventional lead-acid batteries.

Many states have tried and failed for years to comply with federal clean-air standards. "We and most of the Northeast states are violating the standards now, and we're creating a health hazard," says Maryland's Ferreri. Now, they're determined to succeed.

By David Woodruff in Detroit and Thane Peterson in New York

SPORTS BUSINESS

200,000 FOAM TOMAHAWKS: THAT'S NOT CHOPPED LIVER

So, maybe Jane Fonda didn't bite—a lot of Braves fans snapped them u

When a record 750,000 Atlanta Braves fans turned out for a parade to celebrate their team's near-victory in the World Series that ended Oct. 27, thousands of them were chopping the air with little foam tomahawks. Thanks to the Braves' spectacular season, the now-ubiquitous—and increasingly controversial—souvenir has made one local entrepreneur rich and showed just how quickly Major League Baseball can hop on a trend.

Braves fans began their trademark chop—dreamed up in the early 1980s by the fans of the Florida State University Seminoles—late in the summer when the Braves were closing in on the National League Western Div. title. That's when foam-bedding salesman Paul Braddy had his inspiration. Driving from Nashville to Chattanooga, Tenn., on a sales call, Braddy was listening to a Braves game when radio announcer Skip Carey suggested fans needed some tomahawks to help them do their chopping.

INSULTING? NATIVE AMERICAN PROTESTS MAY AX THE TOMAHAWK

Braddy stayed up all night fashioning a foam tomahawk that looked like the Braves' logo. Then he showed it to executives of ARA Leisure Services, the concessionaire at Atlanta's Fulton County Stadium. They ordered 5,000, and a craze was born. On Aug. 15, Braddy, 37, quit his $60,000-a-year job and started selling tomahawks full-time.

SOFT GOODS. Now, Braddy has 23 employees and a 20-state distribution network. Customers such as Kmart Corp. and Wal-Mart Stores Inc. have ordered from Braddy's company, Soft Novelties Inc. So far, Braddy estimates, he has sold about 200,000 tomahawks at an average wholesale price of $3 each.

In early September, about a month into his venture, Braddy says he started getting signals from Major League Baseball that his novelties were infringing on the Braves' copyrighted tomahawk logo. Not wanting a fight, on Sep 14 he approached Major League Baseball Properties, baseball's in-house licensing operation, which, for a percentage, allows team logos to appear on everything from snow shovels to bath towels. By Sept. 15, Braddy had hammered out an agreement good through 1992. He hands over 10%—about $60,00 so far—in exchange for use of the Major League Baseball symbol and retail and distribution support.

MLB Properties also cashed in on fan hysteria in Minneapolis-St. Paul, home of the World Series champion Minnesota Twins. Most of the Homer Hankies that are *de rigueur* for Twins fans come complete with the Major League Baseball logo. It's a lucrative arrangement for all concerned. In Atlanta before game four of the World Series, an MLB Properties executive was reminiscing about an earlier game in Minneapolis. "I looked out at that crowd," he recalled, "and said to myself, 'I wish I had a nickel for every one of those hankies.' Then I realized, I did."

Despite its enormous popularity, the could be the last year for tomahawk mania. Braves President Stan Kasten has offered to meet with Native American leaders to discuss their concerns that the Braves logo promotes negative stereotypes. One possible outcome: The Braves could drop the tomahawk.

Just in case, Braddy is hedging his bets. He's shipping foam tomahawks to colleges with Indian mascots, hoping the chop will spread well beyond the Southeast. He's also talking to the National Basketball Assn. Now, if only the Atlanta basketball team can rally this season the way the Braves did. Foam Hawks anyone?

By Walecia Konrad, with Harr Collingwood, in Atlanta

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ITED BY HARRIS COLLINGWOOD

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PPG INDUSTRIES	1899
BRISTOL-MYERS SQUIBB	1900
ALEXANDER & BALDWIN	1902
NCNB	1903
DOW CHEMICAL	1911
GATX	1919

DATA: STANDARD & POOR'S CORP.

ME WARNER'S IOW-BIZ SHUFFLE

Time Warner got one mony off its back on Oct. 29 by nching its first major stragic alliance with foreign rtners. Japan's Toshiba and Itoh will ante up $500 miln each for a combined .5% stake in a new venture mposed of Time Warner's ovie studio, cable TV, and me Box Office businesses. Analysts like the deal beuse it guarantees Time arner the lion's share of ee cash flow generated by e new entity. Time Warner ll retain management conl of the partnership, called me Warner Entertainment. d it will shift $7 billion of $8.8 billion debt to the new nture's books. Time Warner ock rose 3¾, to 90, in the o days after the news.

HAREHOLDERS TALK, ND FAIRCHILD LISTENS

Stockholder complaints out sky-high executive pay ten fall on deaf ears, but t at Fairchild. The aerospace company, based in Chantilly, Va., recently settled a shareholder suit by agreeing to reduce CEO Jeffrey Steiner's $19.3 million annual compensation package. Under the pact, Fairchild has cut Steiner's $1.4 million salary by $250,000, canceled his options for 50,000 shares, and nixed new option grants until 1993 and raises until 1996.

A Fairchild lawyer calls the adjustments "relatively inconsequential." But Patrick McGurn, an attorney at the Investor Responsibility Research Center, says, "I don't remember ever seeing a case like this." Given the shareholders' success, it may not be the last of its kind.

'GET ME REWRITE—AND ROOM SERVICE'

If you credit the opinion polls, journalists rank in popularity somewhere between foot fungus and members of Congress. But, hey, callous, sensation-seeking newshounds have feelings, too.

So the press release from the Heart of Palm Beach Hotel must have made them feel wanted. The hostelry is pulling out all the stops to lure journalists coming to town to cover the trial of William Kennedy Smith on sexual assault charges. Reporters who sign on for the $59-a-night package won't pay for parking, breakfast, or incoming faxes. And "Betty, our star in the restaurant, will know how you take your coffee from the day you arrive!" Coffee, of course, is to reporters what blood is to vampires. Best of all, the Heart of Palm Beach knows what really appeals to the journalistic soul. The hotel, scribes are assured, is located just "minutes from Au Bar," where, that fateful night, Smith met his accuser.

CHRYSLER HOCKS A DIAMOND

▶ Chrysler buffed up its balance sheet on Oct. 29 by selling its 50% share in the Diamond-Star Motors assembly plant in Normal, Ill., to partner Mitsubishi Motors for nearly $100 million. In addition, Mitsubishi assumed all of Diamond-Star's debt. With the deal, Chrysler sheds liability for $200 million in losses rung up since 1988, when the venture began building sporty coupes for both companies. Chrysler's total aftertax gain: $127 million.

The carmaker had more good news on Oct. 30. The $82 million third-quarter loss it announced is notably better than the $214 million loss of a year ago, indicating that Chrysler's cost-cutting drive is having a positive effect.

FIRST CHICAGO'S CHIEF BOWS OUT

▶ Bogged down by bad loans in commercial real estate, junk bonds, and consumer debt, First Chicago now has another problem to contend with: the search for a new chairman. Barry Sullivan, 60, said on Oct. 30 that he'll retire from the nation's 11th-largest bank-holding company by April, if not before.

Among the possible successors is Thomas Johnson, the former president of Manufacturers Hanover, which merged with Chemical last summer. Richard Thomas, president of First Chicago, is the top inside candidate.

Don't look for Sullivan to swing a takeover before he leaves. First Chicago and Continental Bank deny rumors that chiefs of the two banks discussed a merger, though they do acknowledge meeting to discuss industry trends.

KUWAIT SNAPS UP A KEATING RELIC

▶ The government has gotten rid of a symbol of the excess that spawned the thrift crisis. The Resolution Trust Corp. has sold the luxurious Phoenician Resort in Scottsdale, Ariz., to the Kuwaiti Investment Office. The Phoenician, which features rows of secluded bungalows and grand pianos throughout, was built by Charles Keating's Lincoln Savings & Loan for $296 million. The KIO is paying $111.5 million for the 55% of the Phoenician and a sister hotel that it doesn't already own. U. S. taxpayers, who now own that 55%, will lose $66 million on the deal.

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EDITED BY STEPHEN H. WILDSTROM

HOW BRADY IS COOLING BUSH'S TAX-CUT FEVER

Treasury Secretary Nicholas F. Brady had barely wrapped up an exhausting international economic meeting in Bangkok when he received troubling news. While he was erseas, Republican conservatives persuaded a jittery Presi-nt Bush to propose a tax-cut package to stimulate the ane-ic recovery—and to push for passage as quickly as possible. As soon as he returned to Washington, Brady mounted a unterattack. As a result, chances are that any tax action will deferred until 1992. And the episode showed once again at when Bush advisers fight the President's trusted old iend, Nick Brady is likely to have the last word.

The turnabout was remarkable. As recently as Oct. 21, ush aides vowed to unveil a stimula-e tax proposal within days. By ct. 25, however, the President was unding more cautious. At a press nference, he cast doubt on Con-ress' ability to pass a cut that ouldn't bust the budget. "Deficits atter," he declared. "I don't want to et caught up again in some meat inder on taxes."

BRADY: THE ECONOMY WILL MEND WITHOUT A CUT

EY ALLIES. The statement reflected rady's view that a hastily assembled x cut was politically dangerous and ould do little to boost an economy at he believes is recovering. Bra-'s argument: Bush's insistence that y tax deal include a cut in capital-ins rates would expose him to an-her Democratic assault over "fair-ss." And the rush to pare taxes uld set off a bidding war that ould destroy last year's budget greement and remove the last thread of fiscal discipline.

How did Brady do it? His challenge was to counter a group politically oriented officials who had won Bush's ear with eir argument that the economy was far weaker than the resident's economic advisers had depicted. The group includ-Housing Secretary Jack F. Kemp, Vice-President Dan uayle, and Commerce Secretary Robert A. Mosbacher.

Brady moved to buy time. Chief of Staff John H. Sununu d Budget Director Richard G. Darman had expressed doubts out reopening the budget deal, but they kept a low profile hile the internal battle raged. Brady found key allies in ouncil of Economic Advisers Chairman Michael J. Boskin and p domestic policy adviser Roger B. Porter, who agreed that tax cut could make a sick economy sicker.

This argument got a major boost when the bond markets acted to the tax frenzy by sending long-term interest rates . Higher rates, Brady insisted, would hurt the economy ore than a tax cut would help. "That did it," says one White ouse aide. "The bond markets made Bush very nervous."

Brady used his ties to Senate GOP moderates to build a ckfire. He worked with Minority Leader Bob Dole (Kan.) d senior Budget Committee Republican Pete V. Domenici . M.) to convince the President that Republicans were far om united on the need for emergency action. "That gave rady the support he needed," says one Brady ally.

As the White House applied the brakes, the Hill's conservative consensus began to splinter. At an Oct. 23 meeting on the Hill, Brady challenged the pro-tax-cut faction to show that they had the discipline to help Bush hold the line against a package that included a tax increase on the rich. The assurances weren't forthcoming. Senator Phil Gramm (R-Tex.), who earlier had allied himself with House GOP supply siders, began to have his own doubts. "The Democrats have the numbers, they have control," he concedes.

Brady didn't rely just on Republicans. House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.) was being pressed by his party's leadership to act quickly on tax relief for the middle class. The Treasury Secretary urged Rostenkowski to stand firm.

Although the Administration is backing away from a quick tax cut, Bush is not about to yield the economic policy field to the Democrats. With labor markets still hurting, Bush is tired of getting beat up over his refusal to provide extended unemployment payments. So the Administration is negotiating a compromise with Democrats that would give relief to the long-term jobless.

FALL PREVIEW? After toying with the idea of a fiscal fix, the President has returned to Brady's contention that monetary policy is the only effective weapon against a sluggish economy. With inflation almost invisible, the Federal Reserve is starting to push interest rates lower. But if Chairman Alan Greenspan doesn't move aggressively, he can expect a barrage of criticism from the Administration. And the White House, realizing that no one ever lost an election railing against banks, is prepared to turn up the heat on bankers who are reluctant to lend.

Despite all the twists and turns, tax-cut fever will return. The October debate, says a senior GOP Senate staffer, "is just a fall teaser for the big event in the spring." Bush will propose "growth-oriented" tax cuts in his fiscal 1993 budget. The Democrats will counter with a fresh push for middle-class relief.

But the gulf may not be all that wide. White House officials privately say they can work with a proposal offered by Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.). Bentsen would create a new $300-per-child tax credit and expand the tax break for individual retirement accounts. To make up for lost revenue, he would cut defense spending an additional 5% a year. Bush will insist on a capital-gains cut, and Democratic moderates are inclined to go along. The sticking point is likely to be Democrats' calls for a tax hike on the rich.

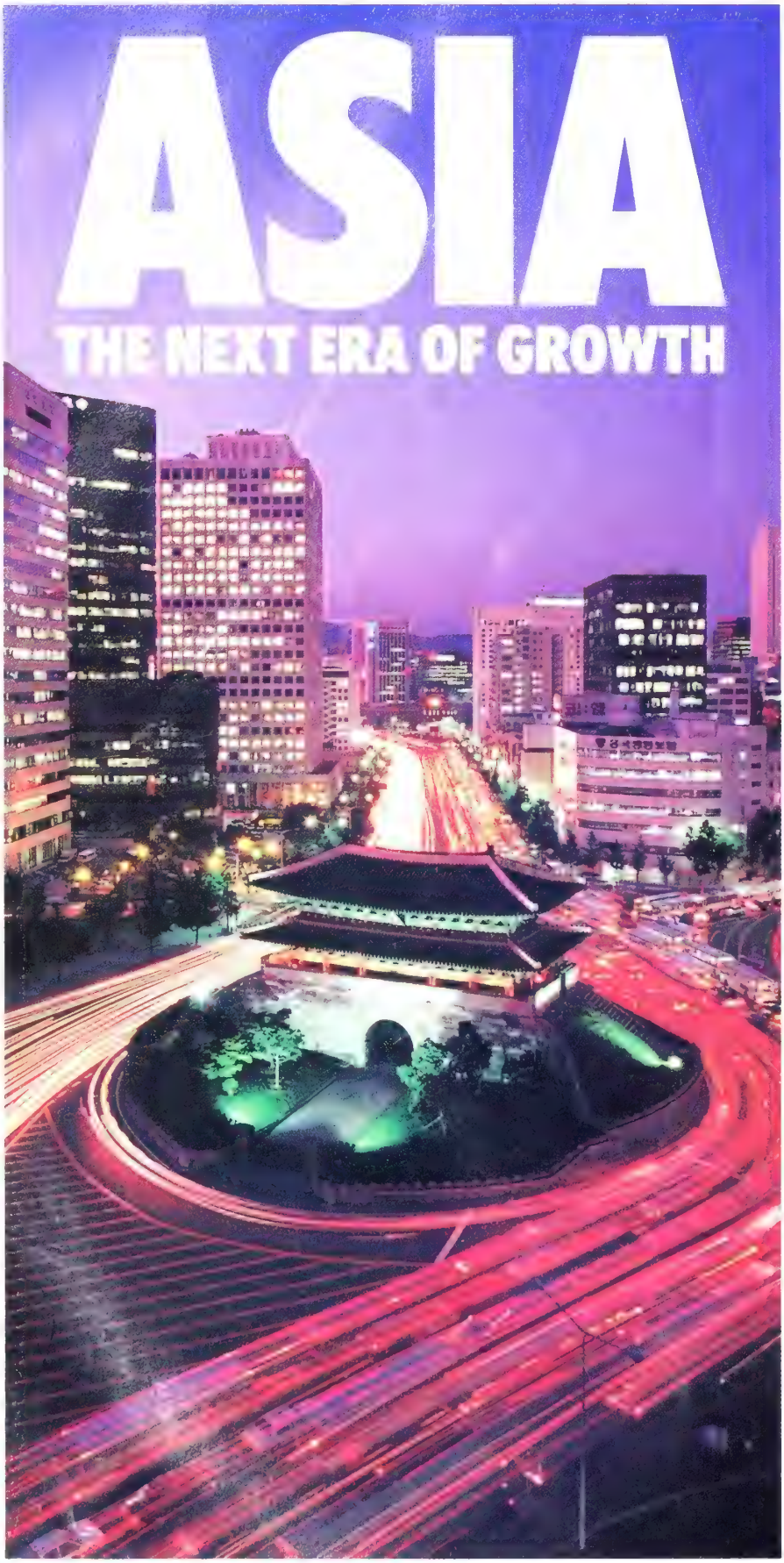
There's nothing to keep Bush, who has already hit the economic panic button once, from having another anxiety attack. But with Congress getting ready to quit for the year, action is unlikely. By slowing the drive for a 1991 tax cut, Brady may have saved the President from a costly mistake.

By Douglas Harbrecht and Howard Gleckman

CHARLIE ARCHAMBEAU II/MATRIX

ASIA

THE NEXT ERA OF GROWTH



For an official few, O was historic. But for Asians, it was a bus day like any other. In Kong, manager Stanle took his usual hydr commute up the Pearl to Communist China, v he supervises a factory ing Victoria's Secret lingerie for Ame women. Somewhere off the coast of N Korea, a freighter loaded with South K rice bound for hungry families in the N was preparing to make a precedent-se delivery. If you happened to be in the ca the Saigon Floating Hotel that morning would have noticed former Vietnamese gees, now U. S. citizens, trying to cut with officials of Communist Vietnam croissants and coffee.

Far removed from these ordinary live ficial history was also being made that The Cambodian war came to a close. North and South Korean Premiers agre an agenda for talks to end 40 years of h ity. And U. S. Secretary of State Jam Baker III said the U. S., the last major out, would start talks on restoring diplo relations with Vietnam. Yet for sophisti Asians following events in their region, political changes seem more like diplo catching up with reality than governm leading them to a new era.

It has been that way for some time. visitors from Hong Kong had to cross crepit white wooden railway bridge and a grim-faced guard wearing a Mao bad get to China. Now, thousands of comm just flash a plastic ID card and pass throu turnstile. In sleepy Kaesong, a North K village near the military zone, where 10- olds play ball in the street, it's concei that in a decade from now roads, hotels a tourist center will bustle with the energy as South China.

JAPANESE MANDATE. There has been no as dramatic as the fall of the Berlin Wal Asia's map is quietly realigning just as s icantly as Europe's. The difference is while Europe and North America stru with economic hard times, Asia is prep for its next economic leap, fueled by t investment, and technology links amon Asians themselves. After decades an deed, centuries of depending on Ameri Europe for vital tec ogy and expanding kets, Asia is seeing dawn of the Pacific tury. And with the ri economic maturity come fresh challenge

Partly to fill the um left by the super ers, Japan is expa its economic, diplor and perhaps even mi mandate throughout

SOUTH KOREA: THE SEOUL SKYLINE SYMBOLIZES THE SHEER FORCE OF THE SOUTH KOREAN ECONOMY

Some worry that a new Japanese "Co-
rity Sphere" will lead to a stranglehold
planet's most dynamic continent. At
me time, several other Asian power-
, ranging from China to Taiwan to Sin-
, are engaged in major arms buildups.
ver, China, Hong Kong, Indonesia,
and South Korea, and the Philippines
e tricky political transitions.
k waves can already be felt as Wash-
redefines its role in the region. The
merican emphasis on economic over
gical struggle is sparking fresh ten-
between Beijing and Washington,
ening to unravel a diplomatic relation-
nly 12 years old. And U.S. relations
apan, another pillar of America's Asian
presence, are entering a more candid phase. President Bush will take a swing through Asia in late November. But that is unlikely to make up for years of neglecting the region, or prevent big shifts in U.S. relations with these two Asian giants.

At the same time, there's a price for success. All the social traumas that were once believed endemic only to the West are now hitting Asia. The Four Tigers—Hong Kong, South Korea, Singapore, Taiwan—all face big internal challenges. So do the six nations of Southeast Asia, which are in the early stages of transforming themselves from labor havens to industrialized nations. all have been able to achieve double-growth for decades while paying scant on to problems now demanding treat- infrastructure limits, labor shortages, ds for greater political freedom, envi- ntal destruction, urban congestion, and he spread of drug addiction and AIDS. ns have no doubts, though, that they t only be able to cope but move ahead. urrent slower regional economy, down he double digits to the 5%-to-7% range, ctually be healthy: It buys time to pre- for more balanced growth. Typical of confidence is Hong Kong's Anil Tha- 'Every morning when Asians wake up, ave another dollar to spend," says Tha- a founding partner in venture capital ny Arral & Partners (Asia) Ltd.

entirely possible, says George Bader, a Kong-based consultant, that Asia's to-

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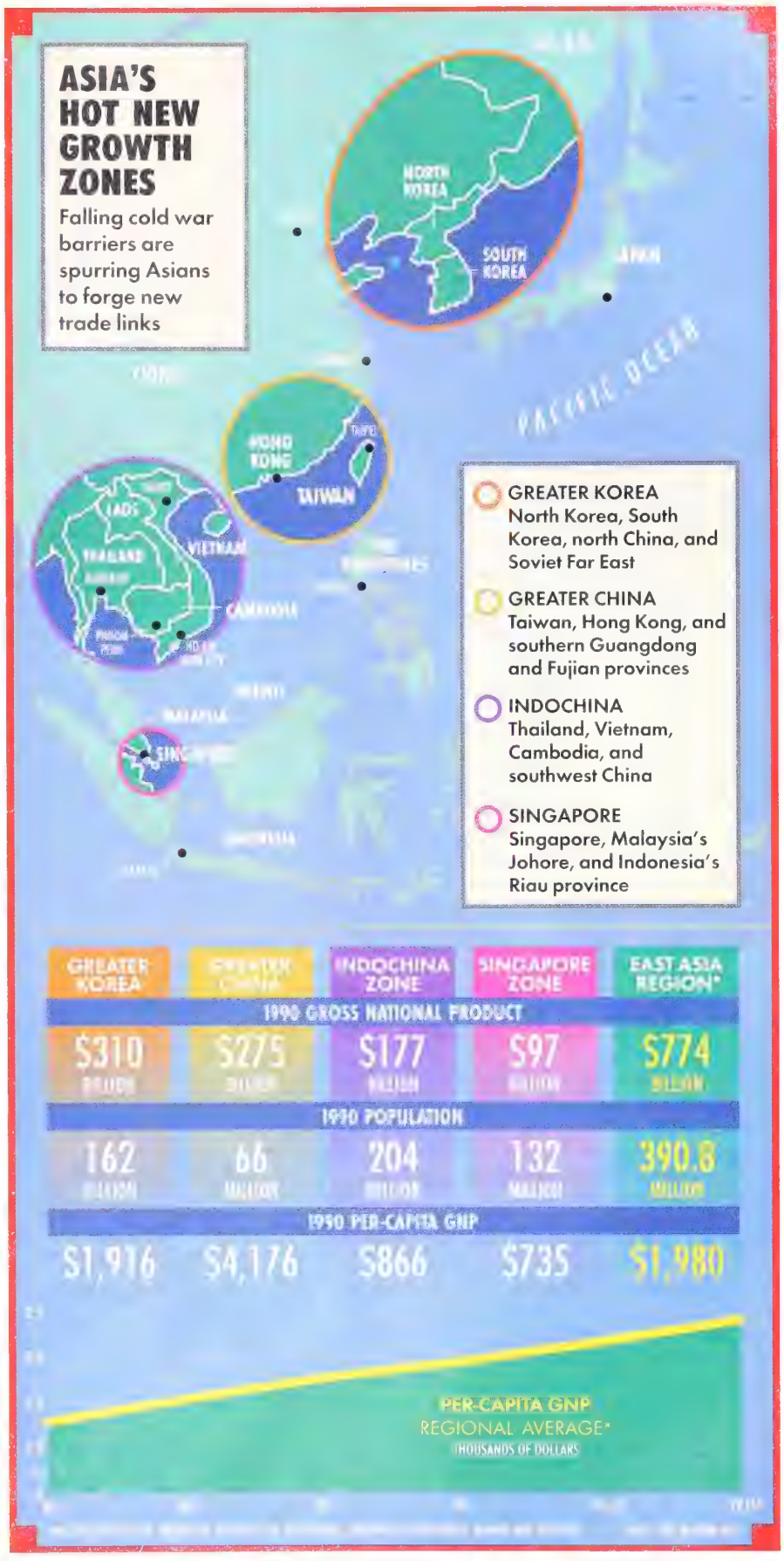


CHART BY LAUREL DAUNIS, ALBERTO MENA, BW

tal gross domestic product, excluding Japan, will be around $5.1 trillion by 2000, rivaling that of the European Community and almost equal to that of the U. S.

The key reason why that may happen is the pragmatism Asians are showing in knocking down ideological barriers. The emerging Asia is best viewed as a collection of dynamic regional groupings. In each of these "growth zones," Asians are pooling their capital, labor, manufacturing, raw materials, and other crucial ingredients in ways that were once taboo. This is helping ease transportation bottlenecks, hold down labor costs, and provide new sources of raw materials.

ate coastline. President Enterprises Corp., the Taiwanese company that recently bought out the U. S. makers of Girl Scout cookies, plans a $5 million ketchup-making joint venture in China's remote Xinjiang province. The company says production of animal feed, dairy products, edible oils, flour, and soft drinks will follow.

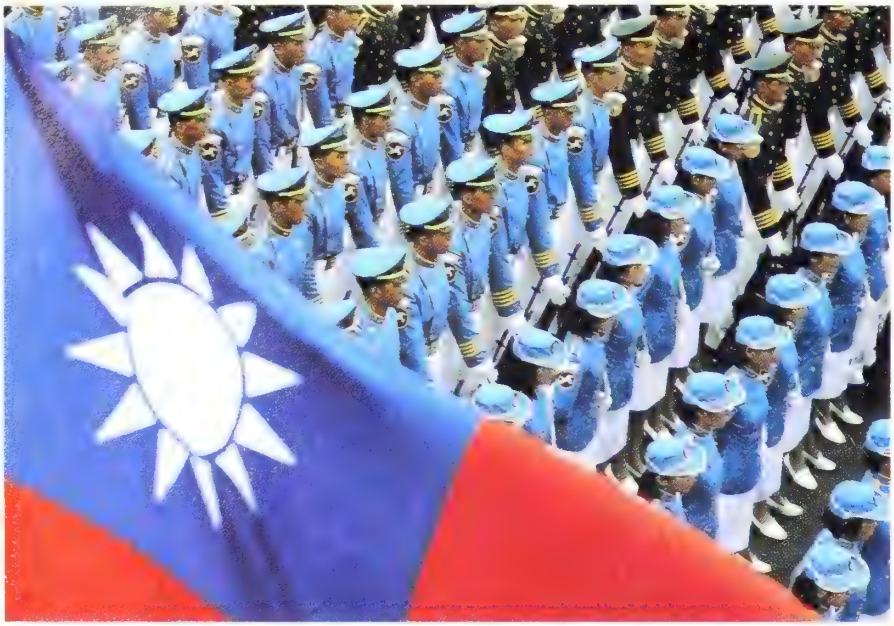
PERFECT MARRIAGE? Predominantly Chinese Singapore is also forging alliances with its suspicious neighbors. This island nation has long been deeply mistrusted in both Malaysia and Indonesia, which are predominantly Malay. Only a decade ago, driving across the bridge from Singapore to Malaysia was like passing from the direct-dial era to the

china. Whoever wins, it's clear the ne linkages across once-inviolable border will prove a potent generator of Asia wealth.

It's only a matter of time before th same thing occurs on the Korean penin sula. Outperformed by the vibrant ecor omy of the South and largely abar doned by Moscow, the North is force to reach out to South Korea, Japan, an other staunchly capitalist nations t survive economically. The force o South Korea's economy and its succes in nurturing relations with both Chin and the Soviet Union have left an isolat ed North Korea no other alternative.

On their sensitive border with Chin and the Soviet Union, the North Kore ans are pushing a economic develop ment zone that wil be open to foreig investors, including Japan. South Kore an *chaebol*, or indus trial groups, are harvesting timber and other raw mate rials from China and the Soviet Union Previously off-limits Soviet military cities such as Vladivostok and Nakhodka are suddenly open, serving as gateways for South Korean joint ventures and Japanese investments.

TAIWAN: LINKED ECONOMICALLY TO CHINA DESPITE 40 YEARS OF HOSTILITY



The most inevitable cluster is Greater China (map). Even though Beijing's Communists and Taipei's Nationalists are still sworn enemies, the linkage of China's land, labor, and production to Taiwan's technology and capital is already a reality in Fujian Province. Throw in Hong Kong's services and it's easy to see why Greater China's economic output is expected to equal France's by 2000.

In southern China, Marxism is irrelevant to daily life. "Communists in our factory?" says Ho of Victoria's Secret, laughing at the suggestion that his weekly commute crosses any political barrier. "We converted our meeting hall that used to be for party meetings into a room for live lingerie fashion shows."

Despite Taiwanese laws banning direct links with China, some 2,500 Taiwan companies have managed to invest $3 billion in China since 1986 through third-party channels. The Taiwanese are moving far beyond China's immedi-

plantation days of curry and gin. But today, Singapore's new growth zone links the city-state's service industries to an industrial park encompassing the southern Malaysian state of Johor and Indonesia's Batam Island, 13 miles south of Singapore. The marriage makes perfect sense: Singapore has an abundance of money but a shortage of labor, while Indonesia and Malaysia have the opposite problem.

Other Asian growth zones are still taking shape. Asians with money and technology are vying to stake out Vietnam, with its 65 million citizens, both as a potential market and as a new source of labor. Thai politicians boast that the emerging Greater Indochina, including Cambodia and Laos, is their "baby." Although the Thais are big traders, they rank only 13th among investors in Vietnam, providing less than 2% of the total. They are outstripped by Taiwan, Hong Kong, and Singapore. And Singapore is determined to compete with Bangkok to be the hub of Greater Indo-

These new growth zones aren't the only reason for Asian confidence. It's also clear that growth can be sustained because Asians have reached a critical mass in financial power. That can be seen in the billions a year that Asia's middle class plunks down for everything from Procter & Gamble Co.'s Pampers to the Ninja Turtle Talking Toothbrush. The toothbrush, produced by Singaporean licensing agent Wilfred Koh of Megacept Consultants, says "Hey, dudes" in Malay, reflecting Asia's demands that Western products be adapted to their tastes. "The kids are getting smarter, and the parents just spend more," says Koh.

Asian confidence can be seen in the surge of investments that the Asians are making in themselves. It can be seen in the rise of intraregional flows of capital, which far eclipse new investments from the U. S. In short, the Asians believe they have the resources to continue their growth march, even if the Europeans and North Americans turn inward.

Take infrastructural spending. At least $500 billion is earmarked for public works and capital improvements—all outside of Japan and only for programs already planned. With the push to raise

ng standards, some expect spending l hit $1 trillion by the next century. iwan, Indonesia, Thailand, and Hong ng all have recently announced ambi- us development programs. In Tai- n, which will spend $300 billion over next six years, American companies competing with the Japanese and equally aggressive French. And ng Kong has finally won approval m Beijing for a new $16 billion port.

The area is promising to be not only huge source of capital for itself but important source of capital for the t of the world. "The only region like- to be a net supplier of funds to glob- financial markets will be Asia in the riod ahead," says U.S. Ambassador Japan Michael H. Armacost. While ch of the cash originates in Japan, erseas Chinese networks are flush h investment funds, too. Asia's fi- ncial markets, still immature, can rely keep pace with the flow of cash. e pool of venture capital in Asia re than doubled, to $20 billion, this ar from last.

NK BASHING. These growth dynamics y be more important than recent ls for a formal economic club. Malay- n Prime Minister Seri Mahathir Mo- mad is urging East Asian countries formally integrate their disparate nomies. This East Asia Economic ucus would include still-struggling etnam and North Korea as well as nomic superpower Japan—but uld exclude the U.S. Boosting his demark anti-American rhetoric, Ma- hir says Asia needs such a group to e it greater clout in dealing with nericans determined to restrain ia's economic emergence.

t does not look as if the proposal will fly anytime soon. Even Mahathir's fellow Southeast Asians are not sold on the notion. The Association of South East Asian Nations (ASEAN) recently endorsed the establishment of a free-trade area within 15 years, but it is wary of going further.

Nor are other grand proposals for charting Asia's future likely to suddenly create an Asian version of the European Community. The Australian-propelled Asia Pacific Economic Cooperation group has no clear agenda and is too sprawling—stretching from Canada and the U.S. through South Korea, Japan, and the ASEAN nations to Australia and New Zealand. "The trouble is, each economy has its own long-term vision," says Dorodjatun Kuntjoro-Jakti, an economist with the University in Jakarta. "First, we need to merge visions. Then, we can begin to talk about merging economies."

But the absence of a common vision won't make the slightest dent in underlying Asian growth. A greater hurdle will be to offset the excesses of untrammeled expansion. The coming decade will, for example, see environmental concerns become a hot issue. Taiwan alone is planning to spend $33 billion for environmental protection and clean-up. In a landmark case, environmentalist groups forced Formosa Plastics to delay a new naphtha cracker project for years. Throughout the region, at least 20 urban areas have grown into what the World Bank calls "megacities" of more than 4 million people gagging on unplanned growth. Their choking pollution and monster traffic jams will demand a remedy. Even in Asia, a Green movement is now under way.

Asians also will be pressing for greater political expression. For decades, they accepted the premise that "democracy slows growth." Now, they will inevitably demand more freedoms.

THAILAND: AN EMERGING CONSUMER SOCIETY

It's unlikely, for example, that Singapore's government can forever continue its heavy-handed policies on compulsory savings, population growth, and wage controls unchecked by popular opinion.

SKILLS NEEDED. A big question remains: Can Asians make the full leap to the standard of industrialization that the West and Japan have achieved? One barrier could prove to be technology. Taiwan, Singapore, and South Korea—Japan's most technologically advanced Asian rivals—are still dependent on the West and Japan for cutting-edge technology. Another limitation is human: After concentrating on cheap labor for so long, the Asians find they lack the skilled engineering and technical talent to make the leap.

Growth won't be even across the board, nor will every Asian see a rise in income. Poverty won't disappear. There are many tensions, between rich and poor, between Chinese and Malays, between Japanese and Koreans, that clearly remain.

HONG KONG: THESE CHILDREN WILL GROW UP IN AN ASIA PROSPEROUS BEYOND THEIR PARENTS' DREAMS

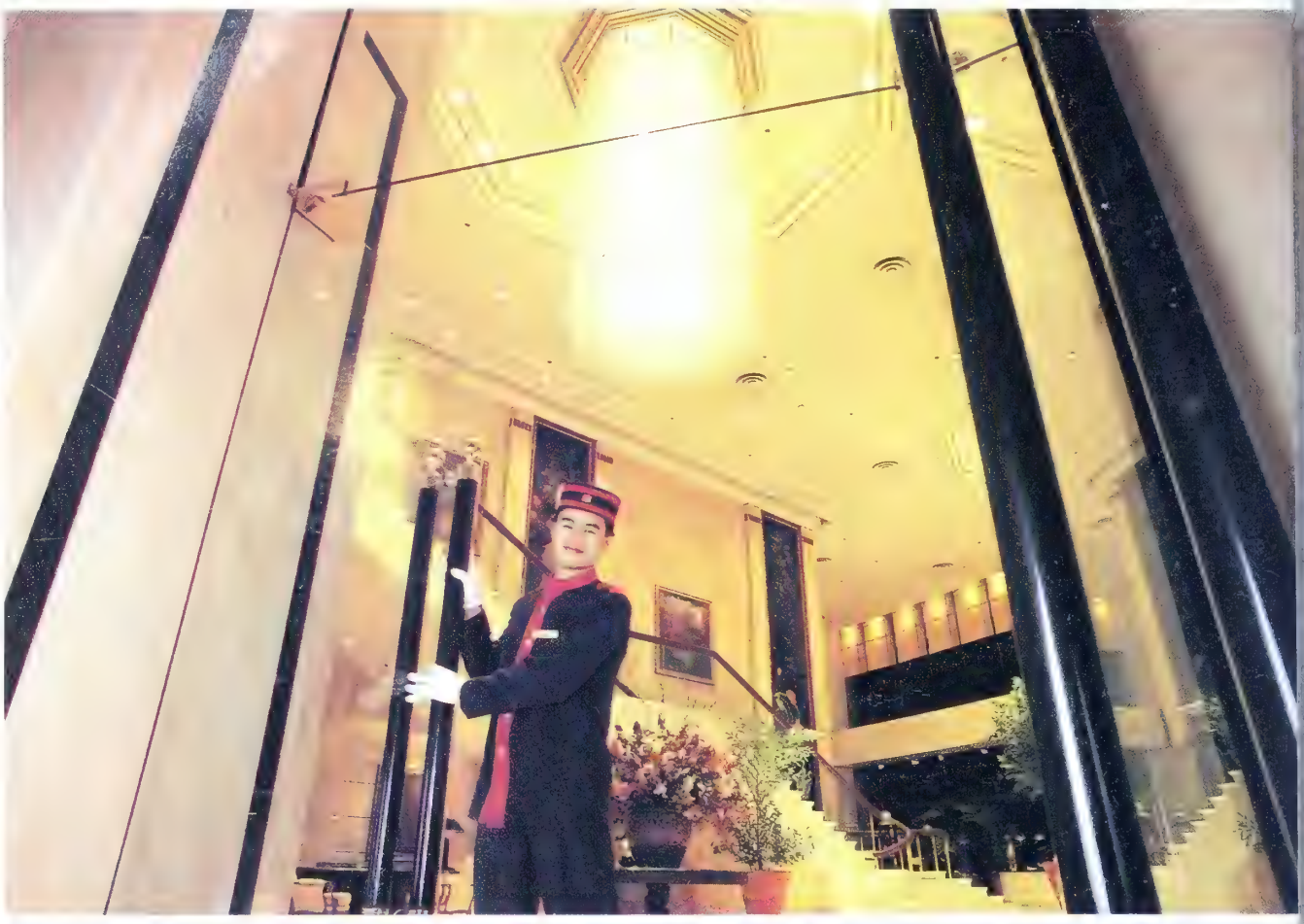
But on balance, the next decade shapes up to be one of exceptional promise for all of East Asia. There is a universal desire among Asians to stand on their own feet militarily and economically, and some have a fair shot at peacefully revolutionizing their politics as well. Across the board, a growing sense of confidence, indeed nationalism, is palpable. To put it bluntly, Asia is no longer dependent on America, and, while friendly, it will increasingly operate by its own Asian standard.

By Dinah Lee in Hong Kong, with bureau reports

JEFFREY AAR

THE CHINESE DEALMAKERS OF SOUTHEAST ASIA

A tight network of tycoons is on an investment binge that could help integrate the region's economie



ROBERT KUOK'S SHANGRI-LA HOTEL IN HONG KONG: ETHNIC CHINESE INVESTORS ARE SPENDING BILLIONS IN THEIR OWN BACKYARDS

The general public rarely gets a glimpse of Robert Kuok. He refuses to be photographed and never gives interviews. But behind the scenes, Kuok is anything but a recluse. He's a crisply dressed, impeccably mannered magnate who knows his vintage European wines as well as his bird's nest soup. The consummate Chinese networker, he is constantly hosting Asia's power brokers and cutting megadeals from Bangkok to Beijing over dinner and a handshake.

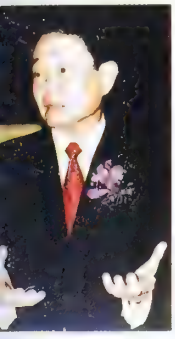
Yet for all his renown in Asia, Robert Kuok's name means little in the West. Equally obscure are Southeast Asia's other ethnic Chinese empire-builders, such as Thai agribusiness magnate Dhanin Chiaravanont or Indonesian financial, cement, and real estate powerhouse Liem Sioe Liong.

'VERY FERTILE.' For good reason. While the Japanese may push ahead with splashy grabs at U. S. assets, the Chinese kingpins of Asia are content to quietly spend their billions in their own backyards. In the past eight years, for example, Kuok's Shangri-La International Ltd. has built 14 posh hotels in Asian cities from Singapore to Hangzhou, China, with six more going up by 1993. "To the Kuok Group, Asia is a very fertile and open market," says Randolph P. Guthrie, Shangri-La's managing director. "We like what's happening in our pond."

Growth in that pond is progressing a a healthy clip, and Kuok isn't the onl one splashing around. From timber ba ons in Indonesia to shoemakers in Ta wan, Asians of Chinese ancestry ar seizing opportunities in neighborin countries. Even though the six govern ments of the Association of South Eas Asian Nations have made scant pro gress in creating a formal economi grouping to compete with Europe an North America, the ethnic Chinese net work of deals and alliances is tuggin the region's disparate economies close together. That's one reason intra-region

l trade is surging (chart, page 62). At the same time, there are natural mits keeping the Chinese billionaires in outheast Asia. Their businesses tend to e tightly knit family affairs involving eal estate, light industry, tourism, and nancial services. They are nowhere ose to having the global clout of the apanese or the Koreans, with their gi- antic industrial groups dominating car- aking, computers, and electronics.

Besides, Asia's emerging multination- s believe that home is where the ac- on is. Last year, trade within Asia sur- passed the region's trade with the U. S. for the first time. These new tigers are picking up where the Japanese left off in 1990 after a four-year investment binge that poured $14 billion into Southeast Asia. Today, Hong Kong and Taiwan together far outinvest Japan in Indonesia, Malaysia, and the Philippines. Meanwhile, money from Southeast Asia flows northward into China and Hong Kong, the center of Chinese capitalism.



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Much of that capi- l is passing through a private network f ethnic Chinese capitalists. Money cen- ers such as Hong Kong, Taipei, and ingapore are overwhelmingly Chinese. n neighboring countries, ethnic Chinese ield astounding control over the pri- ate sector despite being a distinct mi- ority. Only 3% of Indonesia's 182 mil- on citizens are of Chinese descent. But ey account for an estimated 70% of orporate assets. While 12% of Thais ave Chinese roots, the group accounts or 90% of investment. If the 40 million hinese of Southeast Asia were consid- red a single economy, calculates Uni- ersity of Hong Kong management pro- essor S. Gordon Redding, they would ave a gross domestic product of $200 illion.

INO BLOC. The concentration of so uch wealth in so few hands has long een a sore point in a region where any still eke out livings on as little as 200 annually. But increasingly, ana- ysts see the ethnic Chinese network as strategic asset for East Asia's eco- omic development. "In 10 years, you ill see Asian economies linking rough the Chinese," says Ibrahim Ris- d, chairman of Indonesian tire cord aker P. T. Branta Mulia.

Chinese big wheels such as Kuok al- eady traverse the region as if it were

one big Sino Bloc. In addition to his Shangri-La hotels, Kuok owns 34.5% of Hong Kong's dominant television station and is building everything from a massive shopping complex in Manila to a causeway linking Singapore to Malaysia. He is also cultivating deep ties with Communist leaders in Beijing, who are counting on Chinese capitalists to finance pet projects. In May, Kuok joined forces with Beijing-controlled China International Trust & Investment Corp. to form a Hong Kong corporate-takeover vehicle. It should greatly enhance his role as a top mandarin after China assumes control of the enclave in 1997.

Kuok has gained much of his clout—along with a personal fortune estimated

THAILAND'S DHANIN: AIMING TO CREATE A JAPANESE-STYLE INDUSTRIAL GROUP

at $2 billion—through extensive, informal contacts. In a culture in which personal loyalty is paramount, such networks are nurtured through clan ties, years of socializing, and favor-granting to powerful politicians. Unlike Western corporations, says University of Hong Kong's Redding, Chinese businesses more resemble a set of alliances. "The broader the network you have," he says, "the more power you've got."

It does help to have friends. When Kuok builds a new Shangri-La hotel in the region, rich pals such as Indonesia's Liem, Malaysia's Vincent Tan, Bangkok Bank Ltd. Chairman Chatri Sophonpanich, and even Beijing-controlled companies in Hong Kong may chip in up to half of total equity.

CLOSE TIES. Even the Singapore government tapped the network when it wanted to raise $460 million in 1988 to build Suntec City, a showcase office and convention center. Among Suntec's major investors are a dozen of Hong Kong's richest men, including Li Ka-Shing, head of the Hutchison Whampoa empire, media mogul Sir Run Run Shaw, and property barons Lee Shau-kee and Cheng Yu-Tung. "We got it all arranged in one week," says Robert Wong, chairman of United IBV Ltd., an investment bank that put the deal together.

The value of solid relationships goes far beyond getting the inside track on property bargains. Some tycoons, such as Thailand's Dhanin, are aiming to create the regional version of a diversified Japanese *keiretsu*, or industrial group. Already a giant in poultry production, Dhanin's Charoen Pokphand Group aspires to be a major regional player in packaged foods, petrochemicals, and prawn production.

INDONESIA'S LIEM: HE HAS ACCUMULATED 75 COMPANIES IN 24 COUNTRIES

Founded 62 years ago by immigrants from China, the group dominates Thailand's feed and poultry industry with a remarkably integrated operation. The company supplies feed, chicks, and equipment to more than 10,000 Thai farmers. After 43 days, the chicks are picked up for packaging as full-grown broilers. One of the largest poultry exporters to Japan, with $200 million in annual sales, it wants to boost exports to $1 billion in five years.

Charoen Pokphand officials believe their willingness to do business Chinese-style is a factor in CP's success on the

(CLOCKWISE FROM TOP) PHOTOGRAPHS BY MARY BETH SAMMATRIX, NICOLE POTTER, THE STAR

Chinese mainland. It has feed and chicken operations in 15 provinces, all highly profitable. "Many Americans try to squeeze every last drop of profit out of a contract," says Anthony Asvaintra, executive vice-president of CP's Hong Kong-based holding company. Dhanin's approach: CP puts up all capital but gives Chinese partners 15% of profits. That is paying off. When China's biggest motorcycle plant wanted a foreign partner, it approached CP rather than the Japanese. "They just felt a lot more comfortable with us," says Asvaintra.

LIEM'S BATAM ISLAND PARK IS ATTRACTING SINGAPORE COMPANIES

In Indonesia, Liem is building his regional empire both through plain opportunism and by snaring pet government projects. So far, the strategy has worked well for the patriarch of the $8 billion Salim Group. After leaving Fujian in 1937, Liem grew wealthy in the 1940s as the main supplier for anti-Dutch troops commanded by Suharto. After Suharto rose to power in 1966, Liem parlayed his connections into generous bank financing and lucrative trading concessions. The group now controls Indonesia's largest banking, cement, and flour concerns and is a heavyweight in chemicals and property development, often in partnership with Suharto's sons.

BIG PLANS. Liem's ambitions started outgrowing Indonesia in 1982, when he founded Hong Kong-based First Pacific Co., which has since accumulated 75 companies in 24 countries. Most are in Asia, including banks in Hong Kong, soap manufacturing in the Philippines, and Malaysian drugstores. Assets have tripled, to $1.2 billion, since 1986.

In at least one case, Liem's investments are helping change the map of Asia. He is the lead developer of a new industrial estate on Batam, an Indonesian island about 15 miles off Singapore, which is a special export zone jointly developed by Indonesia and Singapore. Industry from Singapore is now flowing to Batam. As a related plum, Liem will develop a potentially more lucrative deal—a $3.5 billion tourism complex on nearby Bintan Island.

Similarly, Hong Kong's Gordon Y. S. Wu, is helping link China with the outside world. In March, Wu's Hopewell Holdings Ltd. defied skeptics by arranging an $800 million loan for a 76-mile turnpike he is building from Hong Kong to Guangzhou, China, that will dramatically improve access to thousands of factories in the Pearl River Delta. Other Hopewell build-and-transfer projects include a proposed $2 billion elevated mass-transit line in Bangkok and power plants in the Philippines and China. Wu is part of a consortium bidding for a proposed $1 billion suspension bridge in Hong Kong. "We believe what we're doing now is just the tip of the iceberg in this region," Wu says.

One overriding question is whether all this cross-border wheeling and dealing presages true Asian economic integration. In light manufacturing, the process is under way. By investing $10 billion across the border, Hong Kong manufacturers of everything from toys to cassette players already have shifted production to southern China. In 1997 integration will be formal. Hundreds of Taiwanese companies are opening factories in Fujian Province, while Taiwan is now the leading investor in Malaysia, Indonesia, and even Vietnam, often linking up with Fukienese. "The real regional action is in small and medium-sized companies," says investment banker Victor K. Fung, chairman of Prudential Asia Capital Ltd.

But size is also these companies' Achilles' heel. Light manufacturing is hardly the foundation of a 21st century high-tech power. Intense regional rivalries and competing development goals mean it will be many years before Asia is ready to talk seriously about formal economic union. Moreover, despite all their dealmaking, Asia's big Chinese tycoons are adding little to the region's long-term industrial competitiveness in, say, automobiles or electronics. "The tendency in this region still is to trade assets and focus on services rather than build manufacturing enterprises," says Peregrine Brokerage Corp. analyst John Mulcahy.

LIMITATIONS. Moreover, earlier forays beyond their Asian pond ran into trouble. In the late 1980s, it seemed as if Chinese tycoons were gearing up to follow Japan's lead into the U. S. But some of the deals that they did undertake were regarded as flops, such as the $538 million takeover of Ramada Inns by Hong Kong hotel giant New World Development Co. and the $285 million buyout of tuna-packager Bumble Bee by Thailand's Unicord Co. In both cases, the Chinese buyer overpaid and underestimated the difficulty of the American market.

Many Asian companies concluded they were better off staying where they know they can make money, and in industries they understand. "We know our limitations," says CP's Asvaintra. Wall Street investment banks keep peddling U. S. acquisitions to investors such as Liem and Kuok but usually go away disappointed. For better or worse, Southeast Asia's hopes of emerging as fully industrialized nations will hinge on Chinese capitalists who are shy about flexing their muscles.

By Pete Engardio in Hong Kong, with bureau reports

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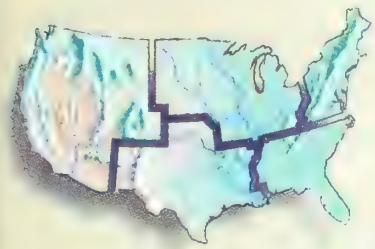

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CARVING OUT A PLACE IN THE PACIFIC CENTURY

The military pullback in East Asia means the U.S. must seek influence based on strong economic ties

America used to be a Big Daddy to East Asia. Its sprawling military presence protected Asians from Soviet- and Chinese-backed communism, while American companies poured investments, totaling $46 billion by 1990, into the region. Americans also encouraged Asians to launch export drives into the vast U.S. market while turning a blind eye to barriers around Asians' own markets. Two-way trade across the Pacific climbed to $285 billion last year, one-third greater than transatlantic trade, with East Asians running a $75 billion surplus. Decade after decade, such surpluses have provided the fuel for the region's economic lift-off.

The relationship started to change even before the end of the cold war: As Asians prospered and U.S. economic troubles mounted, Washington began demanding fairer trading terms. But now, the collapse of the Soviet military threat and a growing sense of economic distress in the U.S. are reshaping American interests in Asia drastically. The U.S. is pulling nuclear weapons out of South Korea, closing bases in the Philippines, and withdrawing 10% of its military forces from the region. At the same time, Washington is demanding greater access to Asian markets while threatening retaliation against the trade practices of such countries as China and Thailand.

NO RETREAT. So when he crisscrosses the Pacific in late November and early December, President Bush will be pursuing a basic goal: to strengthen economic links as the chief underpinning for continued U.S. influence in East Asia. Major themes of his trip, winding up at Pearl Harbor just 50 years after Japan's 1941 attack, will be the end of the postwar era in Asia and the dawn of the Pacific Century. Because of East Asia's dynamism, managing this transition is one of the most crucial post-cold-war adjustments Bush faces. As Japan's economic power rises, the U.S. can no longer be No. 1 in Asia, but neither can it retreat. "Our ability to continue to be a world power will depend to a large extent on our ability to remain engaged in Asia," says Robert E. Driscoll, president of the U.S.-ASEAN Council for Business & Technology, which includes the six members of the Association of South East Asian Nations.

TEACUPS AT AT&T IN TAIWAN: A HUGE TELECOM MARKET IS OPENING UP

It won't be an easy sell for Bush because on key economic issues, he will be asking more than he is offering. Although East Asian trade surpluses with the U.S. have declined somewhat in the past year (chart, page 66), Bush will have to push Asian leaders to open their markets still wider to U.S. products and services. Otherwise, U.S. political pressures for retaliation are bound to intensify.

What Bush will offer, in return, is a pledge that the U.S. will continue to play a major political role—backed by military power—in Asia. In Japan, to bolster a strained relationship, he may seek a formal commitment to a global partnership with the U.S., aimed at wielding the two countries' influence and economic resources jointly to help shape a peaceful and prosperous world. But the Japanese made it clear, during and since the Persian Gulf war, that they aren't interested in just underwriting U.S. global policies—certainly not without a major voice in shaping them. Another cornerstone of America's Asian strategy—relations with Beijing—is under such strain that Bush will not even set foot in China, although Secretary of State James Baker III may visit.

Still, most East Asians want the U.S. to maintain a stabilizing presence in the region. Many harbor considerable mistrust of each other—and are wary of Japan's renascent power. Thus, the U.S.-Japan security treaty is vital, says Bilveer Singh, head of Singapore's Institute of International Studies, not to protect Japan but to restrain it. "We want a balance," he adds.

Officials such as Richard H. Solomon, Assistant Secretary of State for East Asian & Pacific Affairs, insist the U.S. is not pulling back from Asia, merely shifting roles. He told a Senate panel in May that if the Soviets disappeared, "our role as regional balancer and honest broker would, if anything, be more important than ever." The credibility of America's presence will hinge on more than mere diplomacy, however. The engine of growth for U.S.-East Asian relations will have to be private business, much more than in the past. Since the mid-1980s, although U.S. trade and invest-

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ment ties with East Asia have been growing, they haven't kept pace with Japan's. This year, Japanese exports to Taiwan, Korea, China, and the six ASEAN countries—Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand—will total around $107 billion, compared with $60 billion from the U. S. And an estimated $8.7 billion worth of Japanese investment will flow into those countries in 1991, well ahead of the $4.4 billion from the U. S.

Even so, American giants such as Coca-Cola, IBM, Motorola, and Hewlett-Packard have been aggressively expanding their Asian operations: Du Pont alone is investing $2 billion in Asia this decade. Among the relative newcomers also starting to make inroads are AT&T, Procter & Gamble, and Compaq Computer. Colgate-Palmolive Co. has gobbled up 40% of Thailand's shampoo market, once dominated by the Japanese. And after only five years in Asia, Apple Computer Inc. has ties with over 100 Asian software developers, including 40 companies programming for Apple in Hong Kong alone. "Asia is now ripe for a lot of things U. S. companies do well," says Trevor MacMurray, director of McKinsey & Co.'s Hong Kong office. Demand is booming for business services and telecommunications, for example, as Asian economies grow bigger and become more sophisticated.

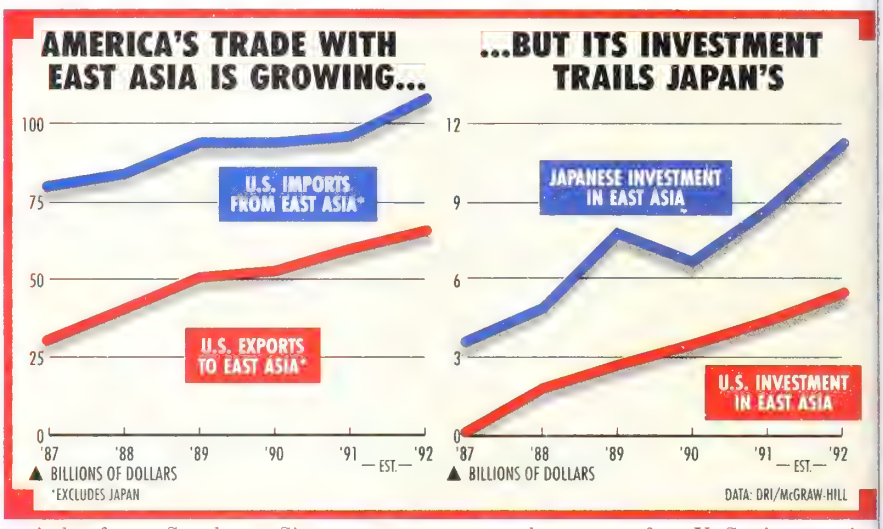
THIN ON THE GROUND. Dollar figures on U. S. investment in the region don't tell the whole story. Pizza Hut Inc. and KFC Corp. are signing up dozens of local franchisees. Sheraton, Hyatt, and Holiday Inns are snapping up hotel management contracts, each worth up to $4 million a year. Citibank is expanding phenomenally throughout East Asia, offering services from automated teller machines and credit cards to home equity loans.

However, small and midsize U. S. companies are thin on the ground in Asia. And U. S. Ambassador to Singapore Robert D. Orr, a former Indiana governor, hasn't had much response to his offer, after arriving in 1989, to help U. S. governors organize trade missions to Asia. Overall, the U. S. economic role in the region has expanded, but not nearly as fast as the Asians themselves are investing in and trading with each other.

In his efforts to enhance U. S. economic clout, Bush will find that relations with capitals from Seoul to Singapore are strained by trade issues. Many Asians resent the U. S. crackdown against widespread abuse of American companies' patents and copyrights. And there is tension over proposals, spearheaded by Malaysian Prime Minister Mahathir Mohamad, to form an East Asian trade group. Washington opposes the scheme, fearing it would sideline the U. S. and pave the way for Japanese dominance. Asians, for their part, worry that Bush is creating a North American fortress with Canada and Mexico that will exclude them. "If the U. S. can d this," says Mahathir, "why cannot we?"

Despite these high stakes, U. S. policy t ward East Asia has been on autopilot fo much of the past three years. Althoug Bush is a frequent flier to Europe, he ha paid only one visit to Japan, America's ke Pacific ally—to attend Emperor Hirohito' funeral in 1989. While Washington ha been preoccupied with crises elsewher from the Soviet Union to the Persian Gul many East Asians suspect a more funda mental reason for U. S. inattention "There's still a very Europe-centered orien tation in American policy," says Alan T Ortiz, assistant secretary of the Philip pines' National Security Council.

Now, while Washington policymakers ar gue that the American defense role is a po tent lever in bilateral relations with Asians some U. S. experts aren't sure that it i worth the price. "What we're doing is ef fectively keeping Asia safe for Japanes business," says former Commerce Dept Counselor Clyde V. Prestowitz.



SUBIC BAY PATROL: "KEEPING ASIA SAFE FOR JAPANESE BUSINESS"?

In response to it critics, the Bush Ad ministration has bee stepping up efforts t pry open Asian mar kets. Bush personall lobbied Indonesia' President Suharto las year to win a $250 mi lion phone contrac for American Tele phone & Telegrap Co. Loan guarantees worth $60 millio from an Export-Import Bank war chest fo key Asian countries helped AT&T clinch th deal. And as China's trade surplus with th U. S. grows, the Administration is pushin harder for economic reforms.

In Tokyo, U. S. negotiators have pep pered the Japanese with complaints abou lack of access for U. S. exports of every thing from rice to financial services. Now Bush may give a new push to joint U. S.

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Japanese talks, called the Structural Impediments Initiative (SII), on basic changes that are needed, from retailing to financial institutions, to open Japan's economy wider. The U. S. plans to take up similar issues with other East Asian governments. But to ease the strains in bilateral relations, the U. S. has also been trying to push multilateral free-trade policies in forums such as the 12-member Asia-Pacific Economic Conference (APEC) and the Uruguay Round negotiations of the General Agreement on Tariffs & Trade.

To link the U. S. economy to East Asia's dynamism, however, American exporters and corporate investors will have to keep pace with the region's burst of growth. While a handful of U. S. companies are doing so, more than an infrequent Presidential journey will be needed to alert Americans to the opportunity in East Asia. At stake is nothing less than the decades-old American dream of being a major player in the booming Pacific Century.

By Amy Borrus in Washington, with Pete Engardio in Singapore and Teresa Albor in Manila

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HOW MOTOROLA TOOK ASIA BY THE TAIL

Last year, as finishing touches were being added to Motorola Inc.'s $400 million Silicon Harbor complex in Hong Kong, Tam Chung Ding summoned his favorite geomancer, or diviner. Tam, president of Motorola's Asia-Pacific semiconductor division, wanted the 87-year-old soothsayer to double-check the new facility's *feng shui*—literally, its wind and water—for good luck. Yes, the omens were favorable. Built on reclaimed land, the project had water—a symbol of wealth—on three sides and was ringed by mountains—a source of power.

But wait, the executive suite's layout was wrong. Tam ordered a major renovation to achieve the proper alignment. Now, he can gaze over his burled wood desk, across the cobalt bay, to the towering face of Horse Shadow Mountain. "This office has about the best *feng shui* in Hong Kong," Tam boasts.

Going to such lengths to honor local traditions is just one sign of Motorola's determination to knock down the notion that U. S. companies can't compete in Japan Inc.'s backyard. Capitalizing on its immense product range, Motorola is pushing into practically every niche in Asia's booming telecom and semiconductor markets. It has backed the push by building 13 factories in nine countries, including big new ones in China and Singapore. And to run it all, Motorola is relying heavily on Asian managers such as Tam and on teams of local technicians and engineers.

WALKIE-TALKIE WIZARDS. The results are impressive. Take Tam's division, one of the most profitable and fastest-growing of Motorola's semiconductor units. In 1990, according to Dataquest Inc., Motorola's chip sales in non-Japan Asia grew 20%, to $528 million, solidifying its No. 3 ranking in the world's most dynamic chip market. By yearend, Motorola could overtake No. 2 Toshiba Corp.

The success extends beyond semiconductors: Motorola is the region's leading supplier of high-end walkie-talkies and digital cordless phones, or CT2, systems. It's even with archrival L. M. Ericsson of Sweden in signing up cellular-communications subscribers from Jakarta to Beijing, and it leads all Japanese rivals. "Motorola has more than NEC, and that's [NEC's] part of the world," says Anthony Langham, an analyst with County Natwest USA.

MALAYSIAN MANAGERS: BIGGER ROLES FOR LOCAL EMPLOYEES

The Asian market is critical to Motorola's growth. Industry sources say that sales in Asia outside of Japan amount to $1 billion a year, out of total sales of $10.9 billion. Motorola recognized long ago that tapping into the rich Asian market required special efforts. A decade ago, it split up its regional semiconductor headquarters in Tokyo, moving the base for the rest of Asia to Hong Kong. Singapore has become the base for most telecom businesses. The restructuring made it easier for Motorola to zero in on the needs of "tigers" such as Taiwan, South Korea, and Hong Kong, as well as emerging markets such as Indonesia, Thailand, and China.

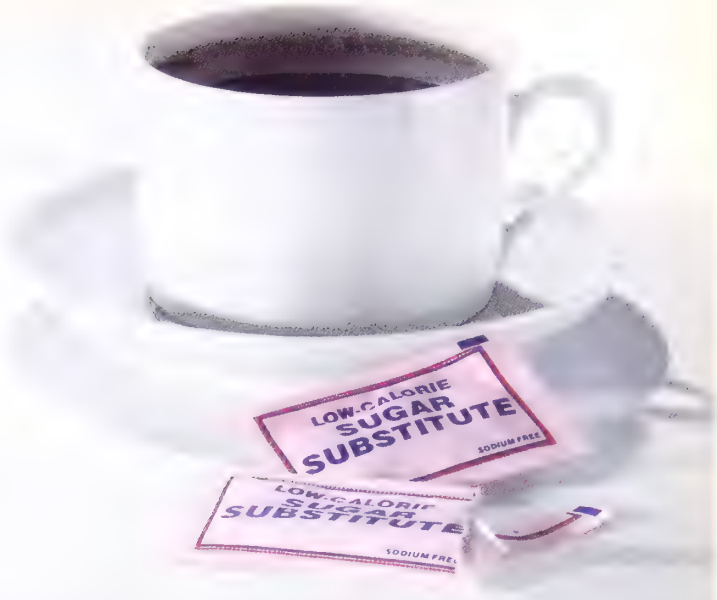
Motorola also realized the East is loaded with brain power, not just cheap labor. Motorola's walkie-talkie plant in Penang, Malaysia, designed the HandiTalkie, a miniature two-way radio that has sold 1.5 million units. Except for one U. S. research manager, Malaysians run the entire operation.

NO CAKEWALK. Not that Asia is a cakewalk. Despite long ties with electronics companies such as Lucky-Goldstar and Samsung, Motorola has only been able to wrest 5% of the Korean market for microprocessors used in home appliances. And analysts worry that Japanese imitators, including NEC and Sony, will overtake Motorola's popular MicroTac cellular phone with cheaper models.

Motorola's riskiest venture is the effort by Tam's division to develop chips for palmtop computers. The latest is a key microprocessor for its new PocSec, a pocket organizer whose screen doubles as a writing tablet. PocSecs would be about the size of a calculator and cost less than $300. The goal is to beat Japanese rivals such as Sony, Sharp, and Casio to the low-priced market.

Motorola is leaning heavily on Tam's instincts, and not just in Asia. When it was building its semiconductor headquarters in Phoenix four years ago, Tam, who was visiting, threw a fit at the layout. At his insistence, two waterfalls were installed in the entrance—to counter the forces of the city's landmark Camelback Mountain just to the north. Competitors may snicker, but Motorola has learned how to wring profits from the secrets of the Orient.

By Pete Engardio in Hong Kong, with Lois Therrien in Chicago, Neil Gross in Tokyo, and Larry Armstrong in Los Angeles



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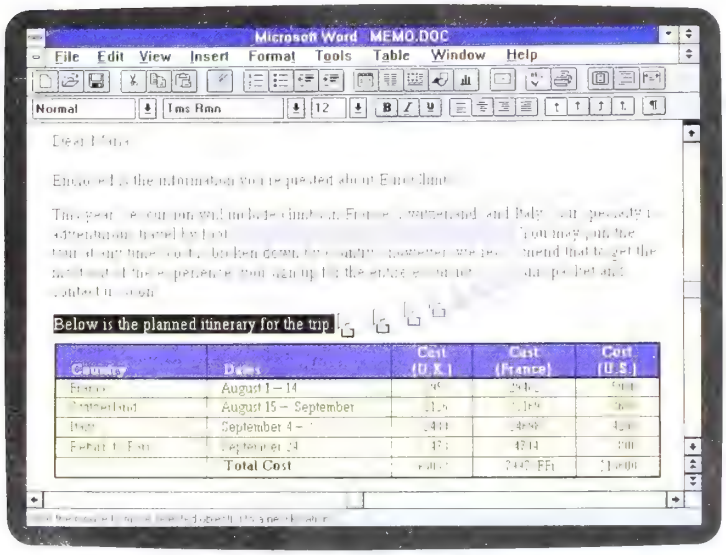

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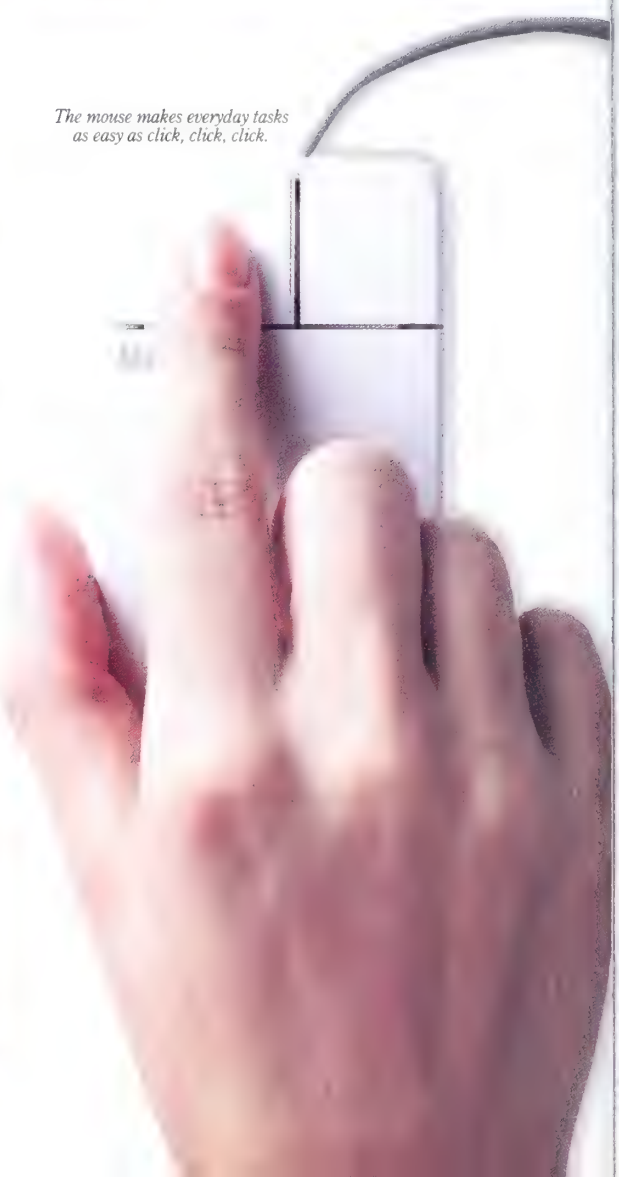

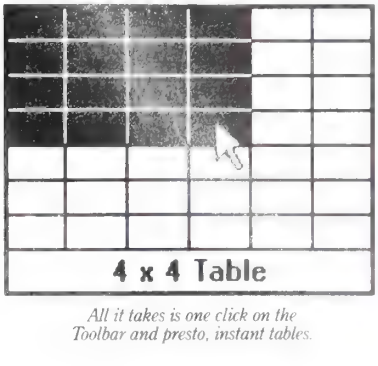

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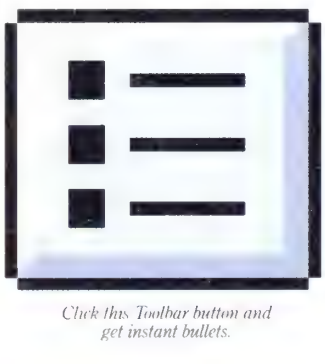

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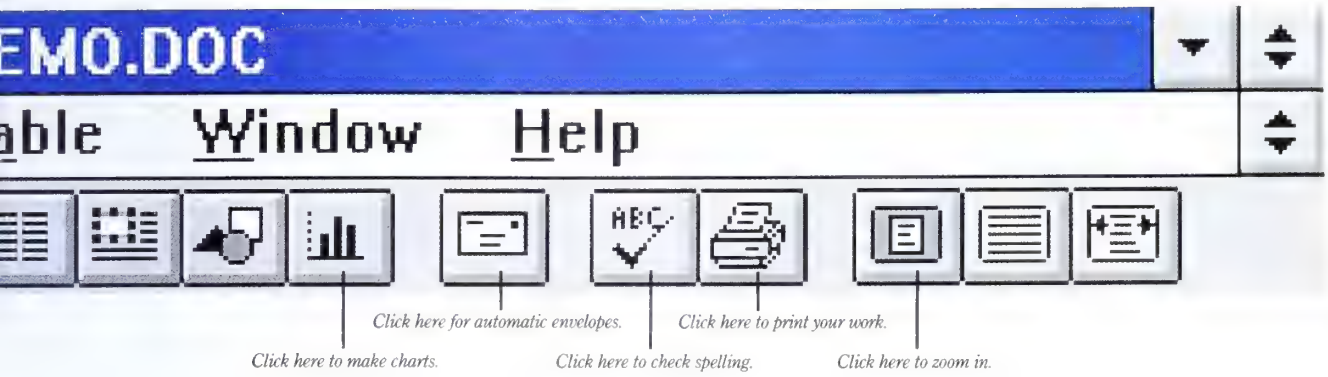

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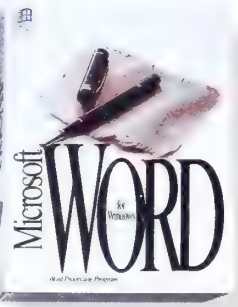

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PRO FOOTBALL

VICTOR KIAM NEEDS A HAIL MARY PLAY

He could easily lose his debt-burdened, poor-playing Patriots

It's fourth and long for Victor Kiam, and the final seconds are ticking away. The electric shaver entrepreneur is on the verge of losing all or part of his 51% share of the New England Patriots, the National Football League team he bought three years ago for $80 million. Co-owner Francis W. Murray, who's trying to launch an NFL expansion franchise in St. Louis, is exercising his right to sell his 49% share of the team back to Kiam for $38 million, with payment due on Nov. 12. If Kiam can't raise the cash by then, he'll lose his share of the team.

So perilous are Kiam's finances that the NFL has stepped in. On Oct. 10, the league assumed control of the Patriots' board of directors to prevent the team from filing for bankruptcy, says NFL President Neil Austrian. Under a gag order imposed by Commissioner Paul Tagliabue, neither Kiam nor Murray would comment. The NFL is helping Kiam find potential partners, but if he comes up short, it will hand the team to Murray. "What everybody wants is a financially sound team," says Austrian.

That would certainly be a change. When Kiam won control of the Pats three years ago, the team was losing money and deep in debt. Kiam bought the club with help from Murray, a Philadelphia investor who put up $25 million for his stake. The deal included an option for Murray to exit the investment in three years at a guaranteed profit of $13 million. The contract required Murray to give Kiam 90 days' notice of his intent to sell. Murray did so on July 10.

When Kiam failed to come up with the cash on Oct. 10, Murray extended the deadline—but only after Kiam agreed to give the NFL the board seats. Murray also announced he would begin searching for a buyer for the Pats.

A quick sale might not end the Kiam-Murray dispute. The team's value has barely grown since 1988, and a fight over sale proceeds could end up in court. The first $45 million in proceeds would go to pay off the team's debt. Kiam's banker, IBJ Schroder Bank & Trust Co. of New York, however, may try to tap Kiam's 51% stake in the Pats to pay some $20 million in personal loans, say people with knowledge of Kiam's finances. But Murray may argue that his contract with Kiam gives him prior claim to the money generated by a sale.

SWEATING: KIAM MUST RAISE $38 MILLION BY NOV. 12 OR HIS 51% OF THE TEAM GOES TO HIS PARTNER

Kiam has few options. His biggest asset, Remington Products Inc., the Bridgeport (Conn.) company he made famous with his TV ads, flirted with bankruptcy last year and is just beginning to show signs of emerging from its slump. Austrian says it's "highly unlikely" that Kiam will be able to borrow against Remington to pay Murray.

While he might be able to sell Remington assets, time is running short. Without borrowing power, he may have to give up majority control to a new partner. There are plenty of candidates. Austrian says he has supplied Kiam with a long list of people interested in buying an NFL team. Potential local partners include Robert K. Kraft and Stephen R. Karp, the owners of Foxboro Stadium, and Joseph O'Donnell, owner of a Boston-area food-service company. None returned phone calls seeking comment.

NOT EVEN PEANUTS. Any new partner will probably insist on changing the way the Pats do business. Kiam has lost money in every year since he bought the Patriots, partly because he's saddled with a terrible stadium contract. The team doesn't see a penny of revenues from concessions, parking, or luxury suites at Foxboro Stadium.

Then there's the matter of image. Last season's sexual harassment incident, in which three players taunted Boston sportswriter Lisa Olson, has proven costly. After the NFL fined the team $50,000 for its poor handling of the incident, most of the Patriots' front office was fired.

Meanwhile, operating expenses go on. One expensive item is the cost of the team's third new coaching staff in four years. To help meet the considerable cost of running an NFL team, Kiam asked the league's owners for a $10 million extension on the $35 million debt limit imposed on all member teams. The extension was granted, and now the Pats have the highest debt load in the league.

The best news for Kiam is the team's on-field performance. The Pats have won three of eight games this year, two more than they won all last season. But home attendance still averages a paltry 40,000, the same as last year and well below the stadium's 61,000-seat capacity.

At this point, the team's chances look better than the owner's. With the game on the line, Kiam is counting on a long bomb to save the day. Experienced football fans, though, know that most desperation passes fall incomplete.

By Geoffrey Smith in Boston, with Lisa Driscoll in Bridgeport, Conn.

The end of the road for overcharges.

AT&T Corporate Calling Card
Essential to the business on the move.

ot all pay phones automatically connect you with AT&T. At some, perator service companies you've never even heard of can charge your ompany two to three times the AT&T price.* But when you use ie *AT&T Corporate Calling Card,* you can be sure you're using ie quality AT&T network for all your long distance calls. So vercharges on long distance calling card calls come to a omplete stop. And you get the quality AT&T service you ant and prices you expect.

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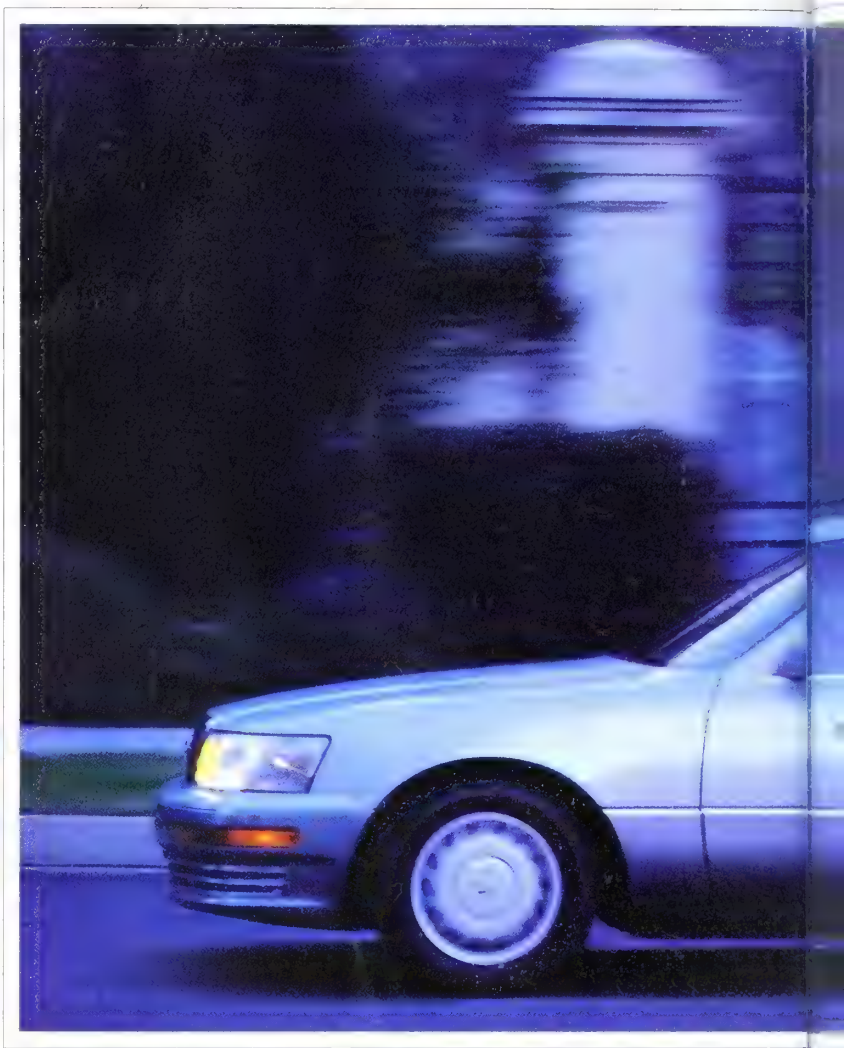
ased on a comparison of billed charges and surcharges alternate operator service companies
1991, AT&T

AT&T



Arrive Fashionably

We have all, at times, found ourselves running a little behind schedule. Though few of us have had the luxury of a Lexus LS400 awaiting our departure.

Once engaged, its 250-horsepower V8 can quickly resolve whatever scheduling problems may confront you.

However, this is not to say that on principle we endorse precipitous travel. Quite the contrary. That would only serve to reduce your time spent within the luxuriously contoured environment of the LS400's cabin.

Once inside, you'll barely feel the forward pull of the Four Cam, 32-valve power plant. The soft, supple seating wi caress you. The high-outpu

arly.

en-speaker audio sys- will surround you. And what ght have been a feverish jour- ney will actually be a voyage of unexpected pleasure.

So the next time your social calendar calls for a timely entrance, consider the benefits of making the trip in an LS 400.

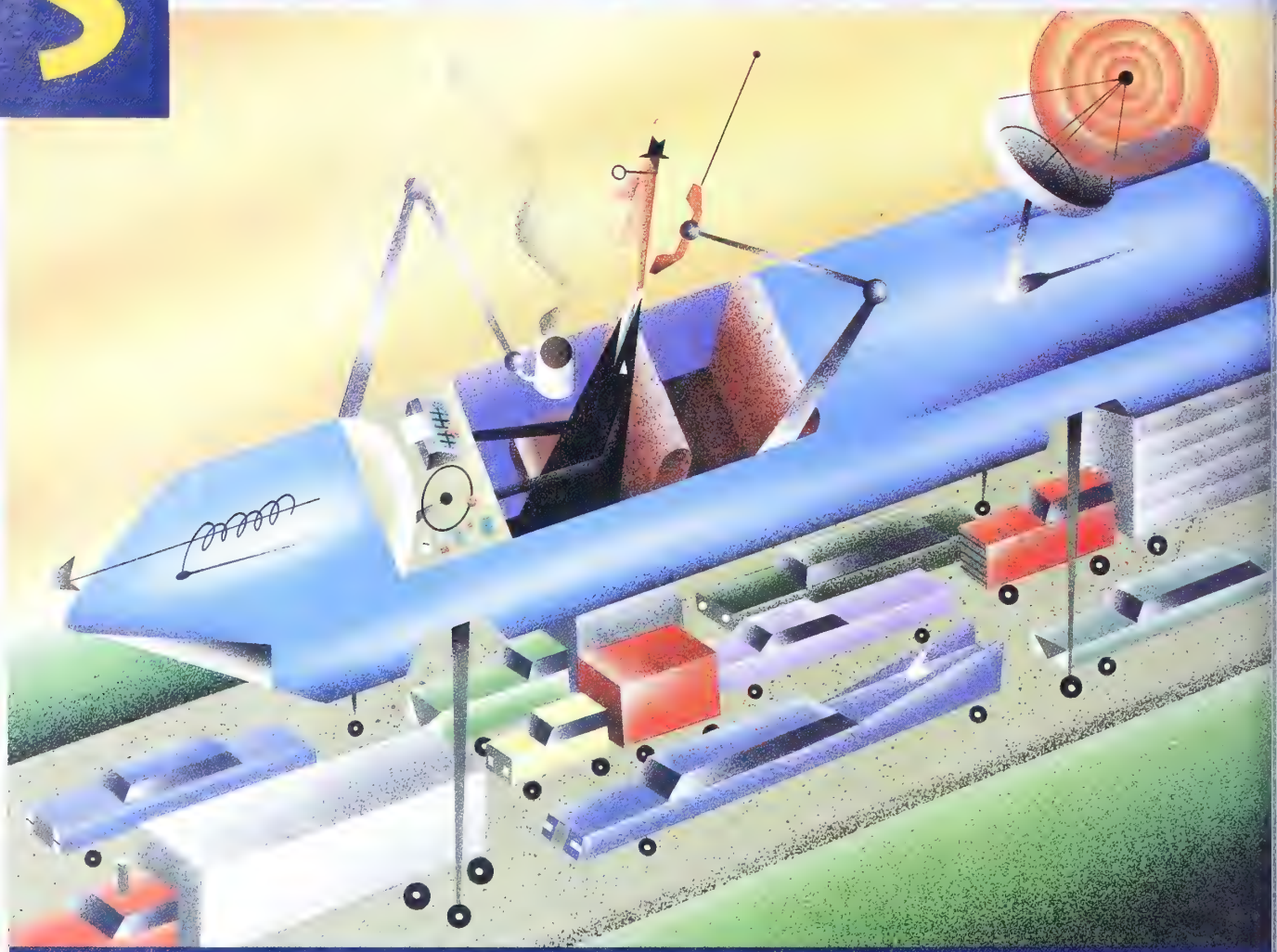
And should the ride become a little too enjoyable, let them wait.

LEXUS

The Relentless Pursuit Of Perfection.

© 1991 Lexus, A Division Of Toyota Motor Sales, U.S.A., Inc. Lexus reminds you to wear seat belts and obey all speed laws. For more information, call 800-872-5398 (800-USA-LEXUS).

SMART CARS



High-tech wizardry and on-board computers are making today's vehicles safer, cleaner, more efficient, and friendlier than ever. If you're like most consumers, you expect your car or truck to perform flawlessly under every driving condition. You want it to perform with high quality and excellent reliability as well. Modern cars do that, and much more. Some are already smart enough to guide you to a new destination, adjust their suspensions to suit road conditions, tell you when a tire is low, modify their own service intervals to match your driving style, and even "talk" to service technicians about their problems. And that's just the beginning. Imagine cars that let you see through fog and warn you about traffic jams ahead. Or vehicles whose instrument readouts seem to hover out in front of your hood so your eyes never leave the road.

These innovations are among the new automotive features coming to dealerships now. This Special Advertising Section tells you what technologies are here, what they do, and how they'll combine with tomorrow's breakthroughs to help make your driving safer, more comfortable and stress-free.

Look beneath the skin of today's sleek new cars and you'll find a startling array of electronics. Peek into the innards of the plainest sedan and you will discover the same thing.

Today's cars carry an average of at least $1,000 in electronic gear. Many experts believe that amount will double by the end of the decade. The jump in onboard data processing power will be several times higher as the cost of computer chips continues to nosedive.

Auto electronics are everywhere. Got a car with cruise control? That's an electronically operated feature. So are automatic climate controls, and those power seats that "remember" different settings for you and your spouse. Vehicles equipped with air bags contain computers to operate those life-saving devices when necessary — and to quietly perform a sophisticated systems check each time you turn on the ignition.

Prefer the look of plain old analog dials in your instrument panel? Many consumers do. But you might be surprised to learn those gauges get their information electronically, just as roomier digital displays do.

There's no escaping electronics in modern cars. Electronic devices perform vastly more complicated tasks than can be accomplished with old-fashioned electrical and pneumatic controls. They do it with dramatically higher reliability, too.

Why the sudden rush to automotive electronics? For one thing, it's a technology whose time has come. Auto makers say there is simply no other way to build vehicles that deliver the performance consumers want, yet satisfy federal safety, emission and fuel economy requirements. Besides, "the public has gotten a taste for electronics," adds Peter Staudhammer, who heads TRW Inc.'s Center for Automotive Technology in Redondo Beach, California "The demand is there."

Research and development on new applications for electronics in cars and trucks is running at an all-time high. More importantly, "technology transfer" groups such as Staudhammer's are taking a refreshing tack. Before, many of them went looking for places to apply new technology. Now they're starting with a real consumer need, then searching for the right technology to meet it.

At the same time, innovations are spreading from luxury and exotic cars to everyday vehicles at breakneck speed.

How fast will the new technology spread? It's up to consumers. Developers say virtually any imaginable service or feature is now possible for cars. But the marketplace will determine demand and drive applications.

Ford's Contour combines contemporary proportions with the latest leading-edge automotive technology.

We're so confident of the Alfa Romeo 164, our warranty even covers things we have no control over.

As a tangible measure of our confidence in the Alfa Romeo 164, we've included a warranty that's much more than just a warranty. It covers, of course, al' basics and then some. But it might aise an eyebrow to discover that the cost of installing your spare tire while you're on the road, or a roadside service call if you run out of gas is on us. The Alfa Romeo Assurance Program. It's standard equipment on every new 164. Call **1-800-245-ALFA** for the dealer nearest y details and a copy of the warranty.*

*Emergency roadside service and trip interruption provided by Cross Country Motor Club, Inc., Boston, MA 02155; except in California, where services are provided by Cross Country Motor Club of California, Inc., Boston, MA 02155.

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The legendary marque of high performance.

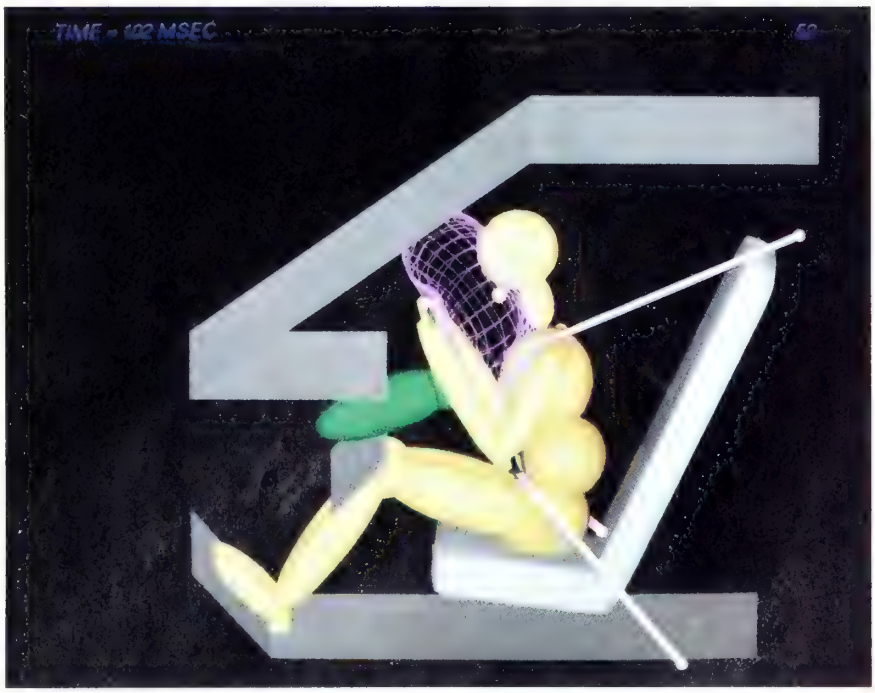
SAFETY AND SECURITY

There's no question that "safety sells" today. Increasingly, consumers want their cars and trucks equipped with every reasonably priced safety system available.

Buyers are also getting more safety built in. Thanks again to the ubiquitous computer, auto engineers can "crash-test" components on display screens before the parts are actually built. The process saves time and money while netting safer and more efficient vehicle design. Developers now routinely evaluate "crush zones" around the passenger to absorb energy in a crash.

United Technologies Automotive has developed the "Piezo" steering wheel concept for cars with air bags. Though not yet in production, it allows convenient location of switches on the wheel while maintaining air bag performance.

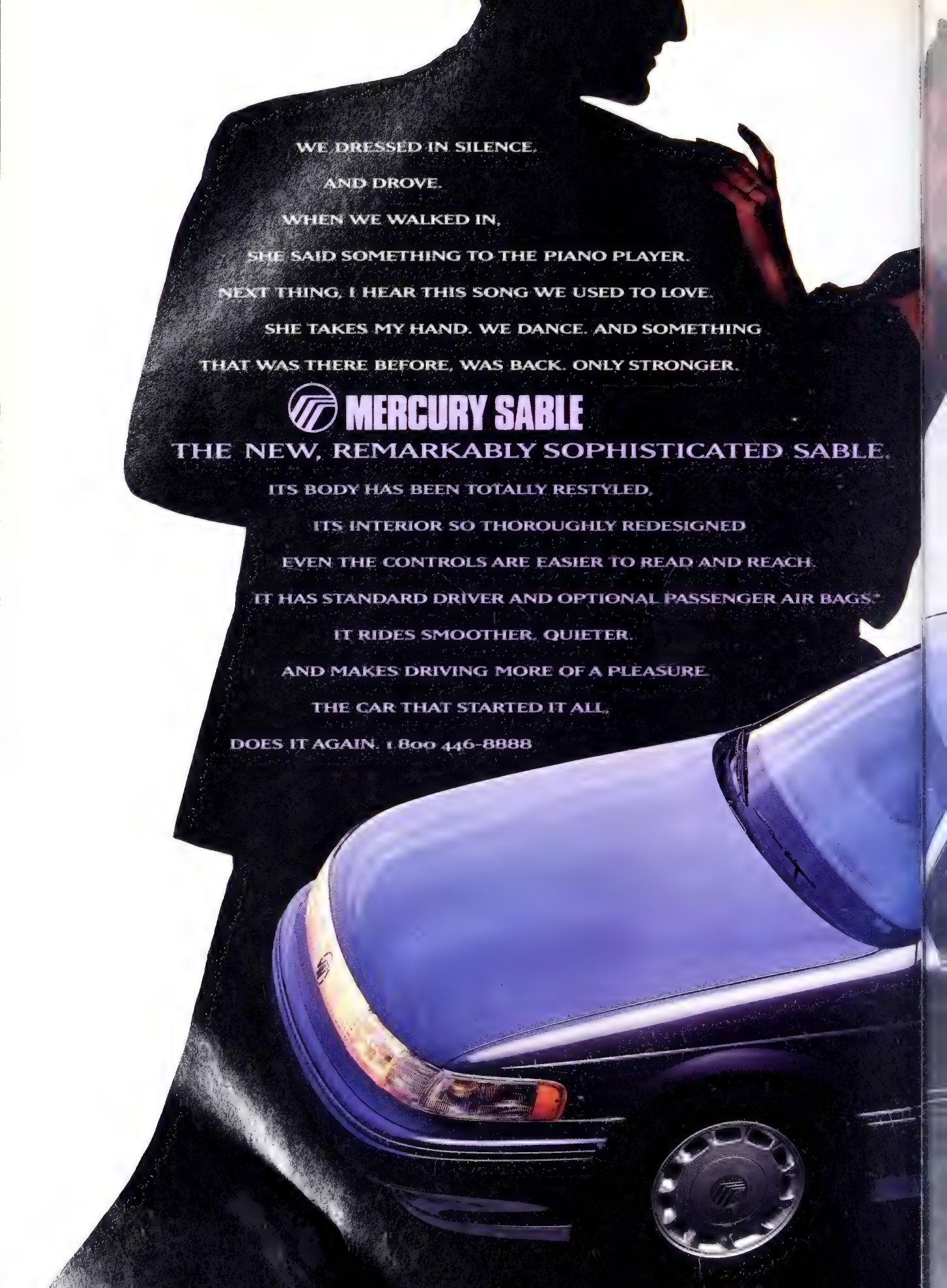
Ford is developing computerized simulation of crash-test dummy interaction with an inflating supplemental air bag.



Air Bags

Perhaps the most important safety addition to the smart car are air bags. In a frontal crash, these pillow-like devices pop out of the steering wheel or dashboard in less than the blink of an eye to form a cushion between you and your car's interior. Then they quickly deflate.

An air bag system uses sensors to tell it when to work. In most cases, the cushion isn't triggered unless three sensors positioned throughout the car agree that a


WE DRESSED IN SILENCE.
AND DROVE.
WHEN WE WALKED IN,
SHE SAID SOMETHING TO THE PIANO PLAYER.
NEXT THING, I HEAR THIS SONG WE USED TO LOVE.
SHE TAKES MY HAND. WE DANCE. AND SOMETHING
THAT WAS THERE BEFORE, WAS BACK. ONLY STRONGER.
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THE NEW, REMARKABLY SOPHISTICATED SABLE.
ITS BODY HAS BEEN TOTALLY RESTYLED,
ITS INTERIOR SO THOROUGHLY REDESIGNED
EVEN THE CONTROLS ARE EASIER TO READ AND REACH.
IT HAS STANDARD DRIVER AND OPTIONAL PASSENGER AIR BAGS.*
IT RIDES SMOOTHER. QUIETER.
AND MAKES DRIVING MORE OF A PLEASURE.
THE CAR THAT STARTED IT ALL,
DOES IT AGAIN. 1 800 446-8888

LINCOLN-MERCURY DIVISION Ford

*Supplemental Restraint System.
Always wear your safety belts.

crash has begun. Their signals are compared by a small computer which then orders the bag to inflate. The computer is also smart enough to tell the difference between a real crash and, say, a light tap on the bumper by another car in a parking lot.

Air bags, coupled with the use of seat belts, can be extremely effective in preventing injury during front-end collisions. Current systems aren't intended to protect — and, in fact, won't inflate — in most other crashes. Even that may change soon. At least one auto maker, Toyota, is reportedly developing a new type of air bag that would fit into a car's doors and deploy during side impacts. Look for them in about three years.

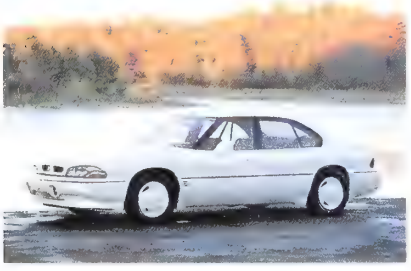
Of course, it's better to avoid a crash in the first place. Many smart car innovations are designed to help motorists do exactly that, primarily by extending the capabilities of vehicle and driver.

Antilock Brakes

Antilock brake systems (ABSs) are a case in point. Conventional brakes can lock up your wheels during hard braking, especially when the road is slippery. If the front wheels lock, you lose the ability to steer around a problem. Instead, your vehicle plows straight ahead — perhaps into the very object you were trying to avoid.

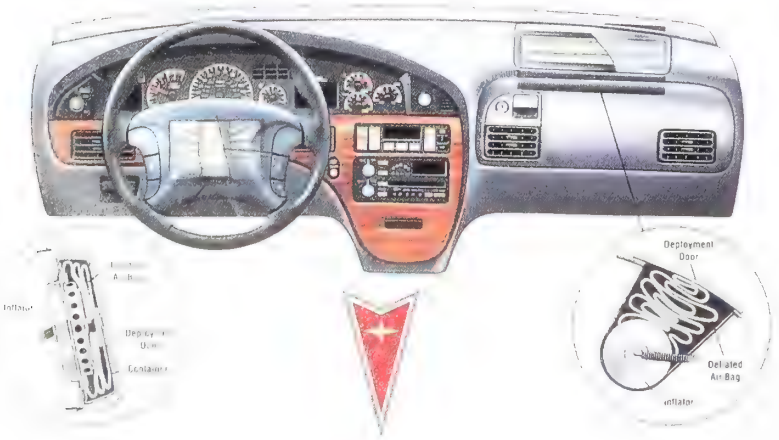
You don't have that problem with ABS. It monitors each wheel separately, and controls the brake pressure to each one independently. The result: Maximum safe braking all around, even when some of your tires are rolling over ice while others are on dry pavement. Experts predict ABS will become standard equipment on almost all cars before the decade is over.

Pontiac's 1992 Bonneville SSEi comes equipped with both air bags and an antilock brake system.



1992 PONTIAC SSEi

FULL FRONTAL (DRIVER & PASSENGER) AIR BAG SYSTEM



Pontiac's fully equipped SSEi includes as standard equipment full frontal driver and passenger air bags.

United Technologies Automotive's new steering wheel concept that pivots on impact.

ABS performs its magic with the help of a control computer connected to sensors near each wheel. The sensors signal how fast each wheel is rotating, while the computer compares that input to actual vehicle speed.

Suppose it notices during braking that one wheel is barely turning, even though your car is still moving at 30 miles per hour. The computer concludes that wheel is close to locking up. It instantly eases the brake pressure to the wheel slightly until it begins to roll again. Then full pressure is reapplied. If the wheel begins to lock, it eases off again. Some systems can cycle on and off 200 times per second to generate control far superior to that possible by even the most expert driver.

ABS is always ready to operate, but it does nothing during normal braking. And if the system fails? Your vehicle's brakes operate as usual, but without the lockup protection.

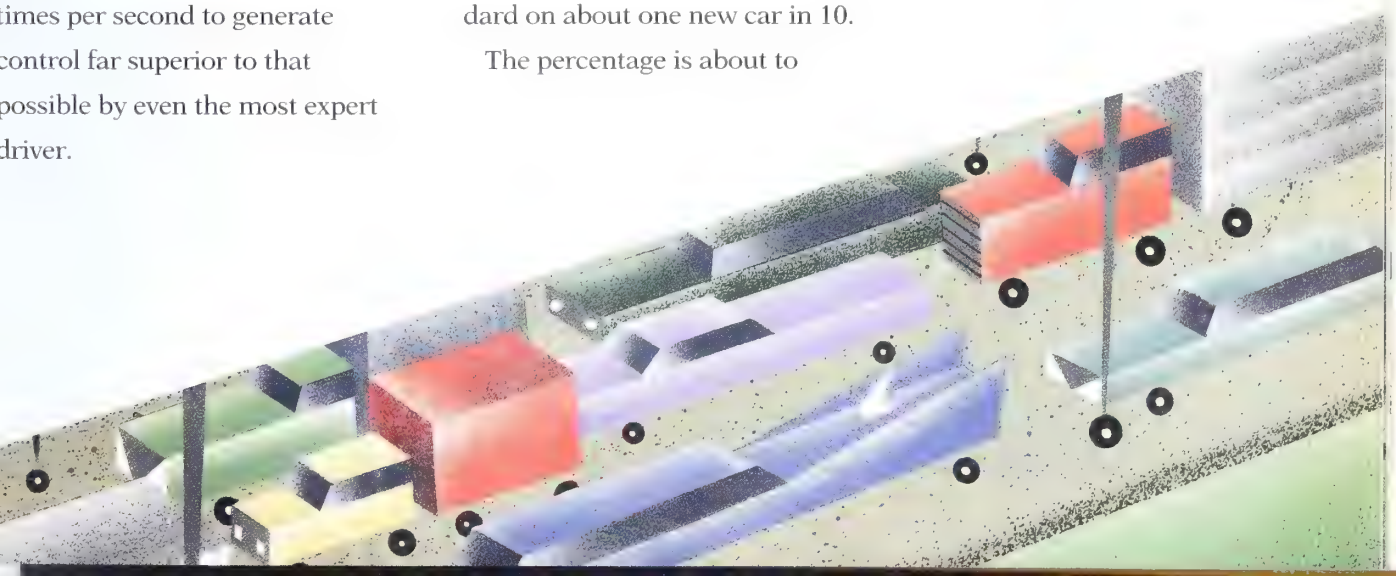
Ford's Crown Victoria has improved rear-drive through specially designed traction controls.

If ABS sounds complicated, it is. That's one reason antilock brakes started out a few years ago as an expensive option available only on luxury and high performance cars. Now prices are falling rapidly, and ABS is standard on about one new car in 10.

The percentage is about to jump sharply, thanks to an inexpensive version of ABS called ABS VII that was developed by General Motors Corp. Costing only a few hundred dollars, the system will help make ABS available in 84% of 1992 GM vehicles, including all its light-duty pickup trucks. The system will come standard in Chevrolet Cavalier, Corsica, and Beretta models.

Traction Control

Antilock brakes sense when a wheel is about to stop too soon. Another emerging safety system, traction control, does the opposite. It swings into action when a



NEW AUDI 100 HAS GERMAN MOTORING PRESS DOING A 180°.

In a surprise turnaround, three of Germany's top automotive journals rated the new Audi 100 V-6 better than the Mercedes 300E 2.6 and the BMW 525i.

ng regarded as the reigning mon-
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MW 525i.
cording to AUTO MOTOR UND
the Audi 100 took control of
suing early and often, besting
edes and BMW in Bodywork,
ling and Control, and Economy.

ll new Audi 100 was rated better than its ition in three separate tests conducted by these g German automotive publications.

has succeeded...in not just ng level with the competition, oving ahead of it."

ould seem that the eight years engineers had labored over this t of Audis had indeed paid off. dres Borchman, editor of AUTO aid, **"The new Audi 100 is no r number three among the dis-shed German marques, but, test proves, number one."**

e test journalists at MOT made nimous: **"The Audi is clearly serving winner."**

Compared to the $42,950 Mercedes 300E 2.6 and the $35,625 BMW 525i, the Audi 100S is priced at $29,900. That includes V-6 engine, ABS brakes, driver's side airbag, galvanized body and 3-year or 50,000-mile limited warranty.***

Both on the surface and beneath the skin, the new 100 differs dramatically from its predecessors. The styling is more dynamic. The interior is roomier.

And the venerable 5-cylinder power plant has given way to a 172hp V-6 engine with superior low-end torque.

One area that wasn't tested but should be mentioned is the Audi Advantage: A program that includes the cost of all scheduled maintenance, even oil changes, for three years or 50,000 miles.

Neither Mercedes nor BMW can top it. Nor can they any longer claim to be at the top of this class. That honor now belongs to the new Audi 100.

AUDI 100S AT A GLANCE

GENERAL: Front-wheel drive, 5-passenger sedan, 4-door galvanized body

ENGINE: 2.8-liter SOHC V-6, iron block, aluminum heads, 172hp. Multi-path induction system

DRIVETRAIN: 4-speed automatic or 5-speed manual transmission

STEERING: Rack-and-pinion, power-assisted, vehicle speed-sensitive

BRAKES: ABS, power vented front discs, rear discs

PERFORMANCE: 0-60 mph in 8.8 sec/ Top track speed 130 mph (manual version) 26 mpg Highway, 19 mpg City†

MAJOR STANDARD EQUIPMENT: Driver's side airbag, automatic tensioning front seatbelts, power steering, windows, seats, and locks, A/C, cruise control, tilt and telescopic steering, two-way power sunroof

SOUND SYSTEM: 8-speaker AM/FM stereo radio/cassette w/anti-theft features

**Prices based on MSRP with manufacturer's excluding taxes, license, freight, dealer charges and options. Equipment levels vary. Prices subject to change.*
***See dealer for details. †1992 EPA estimates.*

For the Auto Motor Und Sport test results, call 1-800-FOR-AUDI.

Through the electronic control modules made by GM's Delco Electronics Corporation, General Motors has become the largest manufacturer of computer controlled vehicles in the world today.

wheel is about to spin too fast. Its purpose: To help prevent your car from fishtailing when you accelerate too hard on a slippery surface.

Traction controls have been designed primarily to improve the performance of rear-drive cars, though the system's debut in an American car came in the 1989 front-drive Cadillac Allante. Still relatively expensive, traction control is currently available in such luxury models as the Lexus SC400, Chevrolet Corvette, and Ford Crown Victoria.

ABS and traction control make a sensible combination, since both systems can share such components as wheel sensors. But traction control requires its own computer, along with additional hardware.

A traction control system constantly checks to see if either rear wheel is turning faster than the two non-driven wheels in front. If so, it knows more power is being delivered to that wheel than can be used safely.

When one wheel spins, the system responds by automatically applying just enough braking force to that wheel to bring it under control again. If both wheels are spinning, the system overrides the driver's "heavy foot" by throttling back the engine or changing its spark timing to reduce power.

Like ABS, traction control can juggle differences in traction from one side of the car to the other. The benefits to motorists? Acceleration is smooth and controlled, even over slippery patches of roadway. The system also adds control when you pull out to pass or encounter gusty side winds.

Collision Warning

For decades auto makers have dreamt of equipping cars with airplane-like radar that would help cars detect and avoid collisions. They worked on units

With General Motors' Tech 1, a technician can set up specific parameters to isolate electronic faults occurring within a system. Unlike scanning systems, Tech 1 does not limit the user to preselected values.

hat would sound an alarm, apply he brakes automatically, and even take control of the steering f necessary.

Mazda, in fact, hopes to go nto production by the end of the decade with a system that uses hree television cameras to check raffic and steer away from rouble if necessary.

Simpler versions that merely sound a warning — and leave the driving to the driver — are just coming to the aftermarket now.

One of them will be offered n mid-1992 by VORAD Safety Systems Inc. in San Diego. Presdent Paul Bouchard says the device will carry a hefty, $1,500 price tag. But he figures costs could drop as low as $500 in five years if sales volume is strong enough.

The VORAD system operates on the same band as police radar guns. It examines the road ahead via a 6-by-8-inch domed antenna mounted in the grille. A computer the size of a cigar box checks incoming data to decide whether a collision seems imminent. If so, it sounds an alarm and displays a warning light on the instrument panel.

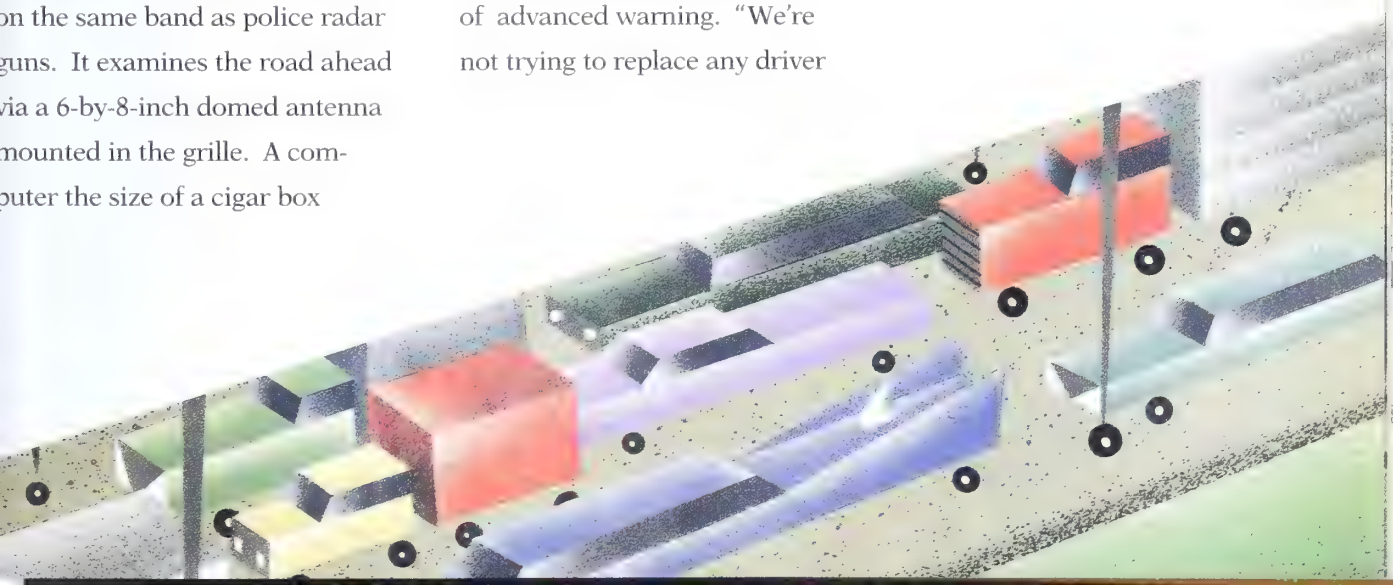
Why bother? Bouchard says studies show about half of all collisions occur in straight-ahead situations. And more than half of those could be avoided if motorists had even one second of advanced warning. "We're not trying to replace any driver responsibilities," he says. "We're trying to enhance the driver's performance."

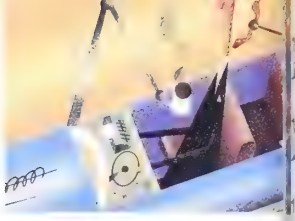
The VORAD system does a bit more than that. Its computer contains a removeable "event recorder" that police can use to reconstruct an accident involving a radar-equipped vehicle.

Bouchard believes the device will prove especially useful in cars also equipped with ABS. The reason: Antilock brakes don't leave skid marks, eliminating an important tool with which law enforcement officers can analyze accident scenes.

WHAT ABOUT RELIABILITY?

Seasoned car owners have heard auto makers tout increasingly complicated vehicles before. And





too many of them ended up going back to their dealerships time and time again to fix problems.

What's so different this time? Auto makers say reliability is up sharply, and so is the ability to troubleshoot today's cars.

Ford Motor Co. attributes improved electronics for helping it maintain its top quality ranking among domestic cars. "The reliability issues of the past have been largely resolved," declares Len Groszek, technical planning manager at Ford's Electronics Technical Center in Dearborn, MI. Failures among electronic components, he notes, are now measured in parts per million.

Next-generation auto electronics will have built-in redundant capacity. Instead of failing, they will actually be able to "rewire" themselves automatically.

That kind of performance is simply impossible to achieve with old-fashioned mechanical systems. But that doesn't mean computerized devices will ever be flawless.

"Electronics are inherently much, much more reliable than the systems they replace, but they're more difficult to diagnose," explains Jack Schickler, director of marketing and customer service for GM's Service Technology Group.

GM was the first auto maker to install engine control computers across all its car lines in 1981. The same year it became the

In 1986 General Motors introduced its GM CAMS (Computerized Automotive Maintenance System). This terminal system contains its own computer which links into the vehicle and a GM information center.

983 "From the road to the roof it's laced with intriguing tidbits and thoughtful touches." *Car and Driver*

984 "The new front-drive Camry 4-door sedan offers comfort, quality, and interior space in generous portions." *Motor Trend*

985 "Most trouble-free new car in America."* *J.D. Power and Associates*

986 "Best Buy" *Consumers Digest*

987 "If the world's auto manufacturers were only allowed to build one car to satisfy the needs of all car buyers everywhere, the Camry would be the logical choice." *Motor Trend*

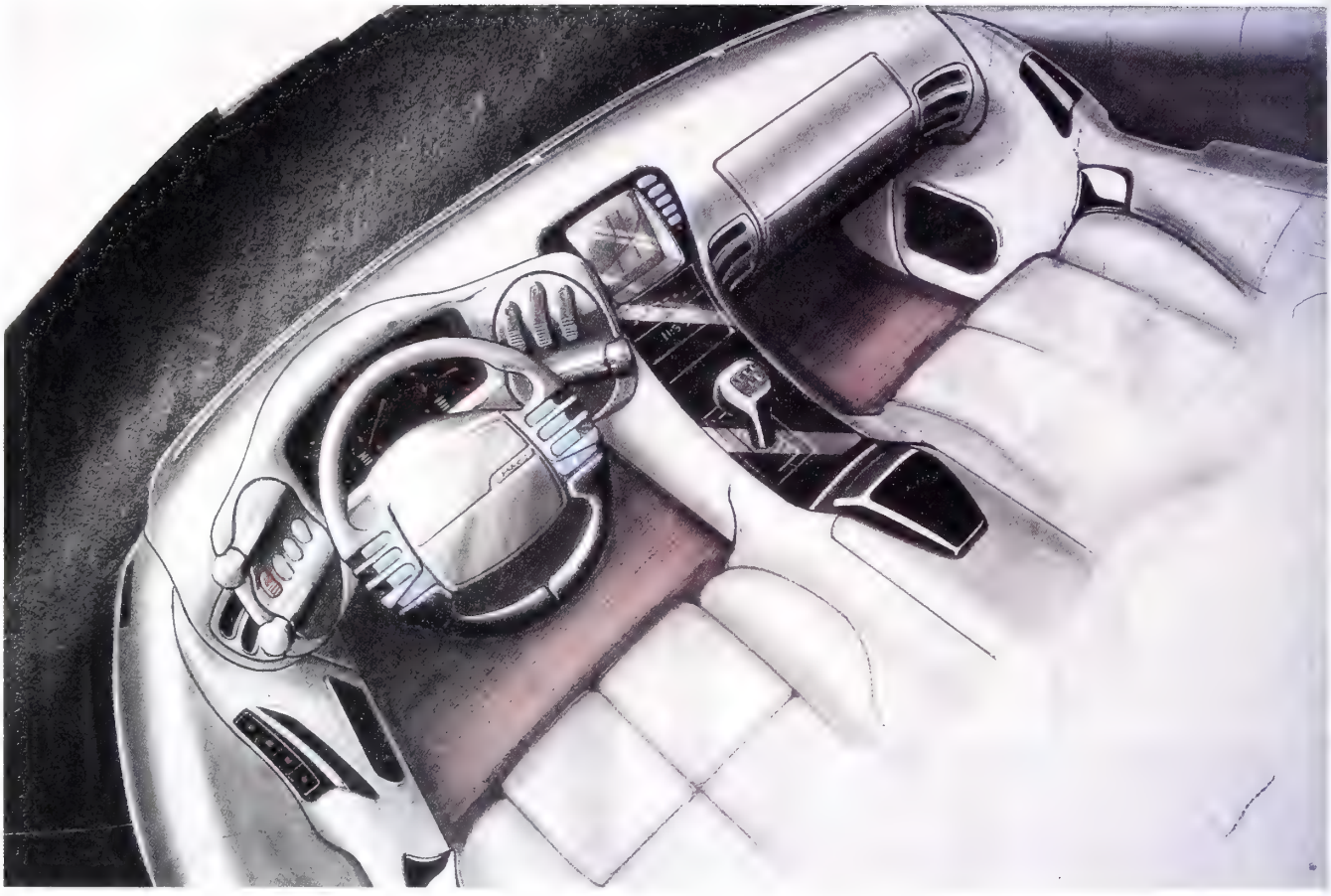
988 "The Camry is everything a family car should be." *Car and Driver*

989 "Family Car of the Year." *Family Circle Magazine*

990 "Most trouble-free compact car in America three years in a row."* *J.D. Power and Associates*

991 "Ranked in J.D. Power and Associates Top Ten models in Initial Quality."* *J.D. Power and Associates*

992. WE JUST COULDN'T LEAVE WELL ENOUGH ALONE.



United Technologies Automotive's conceptual interiors include everything from robotically applied wiring filaments, molded-in air diffusers to new materials for seats and paneling.

industry's first manufacturer to equip every new car with a standard, under-dash "data link" plug. Technicians now use the plug and one of three diagnostic computers to analyze the vehicle's electronics. The Service Technology Group's 300-member "software factory" near Detroit cranks out monthly updates on compact disks to keep the analyzers up to date.

Most GM dealers also have "flight recorders" available to capture data about those annoying glitches that always seem to go away when you bring your car in for service. The units plug into a car's data link to monitor the vehicle's behavior continuously. If a problem occurs, the driver can push a button to record a "before-and-after" electronic snapshot for analysis later.

Of course, fancy hardware isn't enough if technicians are insufficiently trained to use it properly. That's why auto makers have stepped up training dramatically for their dealership technicians. GM, for example, now operates some 200 training centers and

coordinates two-year college degrees in automotive technology through 50 colleges.

CREATURE COMFORTS

Developers are working on electronic gadgets to make life in your car a little easier.

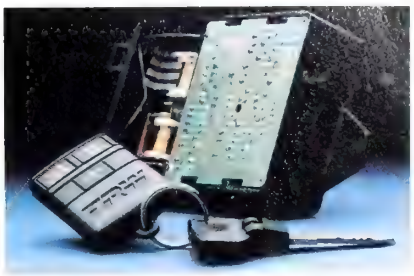
Consider Panasonic's electrostatic filter. The shock-proof unit, currently available only in Japan as a dealer-installed option, fits into the rear package shelf and runs off the power line to your trunk light. Panasonic says the device can scrub the air in your car of pollen, dust and smoke particles as tiny as 0.03 microns. The company estimates the system could be built into new-car ventilation systems at the factory for less than $100.

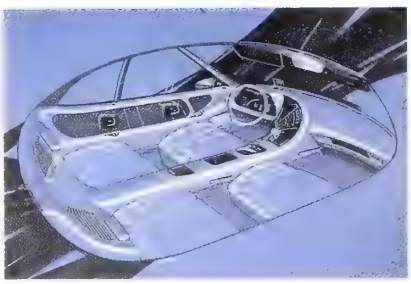
BMW has introduced a number of creature comfort innovations. The backseat headrest in its 7-series models, for example, normally tucks down to avoid obscuring the driver's rear vision. But when a passenger buckles up in back, the appropriate headrest rises into position.

BMW has also come up with a unique way to seal door windows. Wind leaks can be a problem in cars where the glass rests against a rubber seal rather than sliding up into its own frame. The system in the BMW 850 coupe locks the top edge of each door window into the roof itself. So how do you open the door? Just grab the handle, and the window automatically rolls down 3/4 of an inch to clear the roof channel. Close the door and it rolls up again.

BMW, meanwhile, has developed an electronic version of the wire "curb feelers" popular in the 1950s. Object sensors mounted in the bumpers sound an alarm when your car gets too close to a parking lot pillar or your kid's tricycle. It's a $650 option in BMW's top-of-the-line sedans sold in Germany.

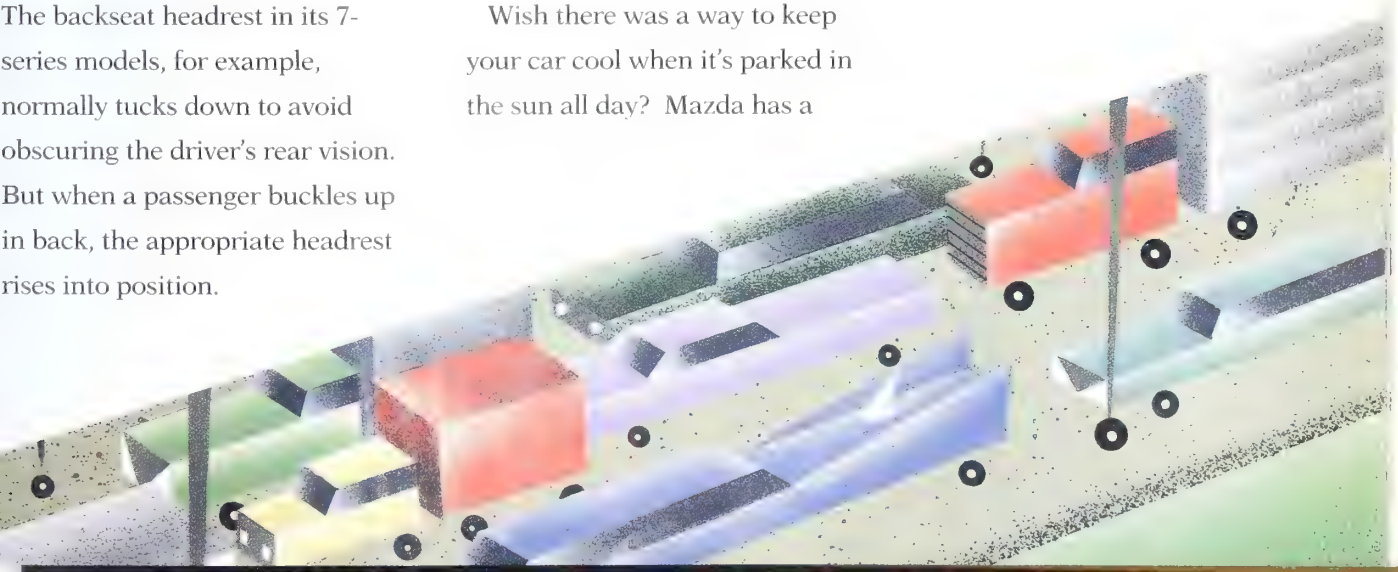
Wish there was a way to keep your car cool when it's parked in the sun all day? Mazda has a

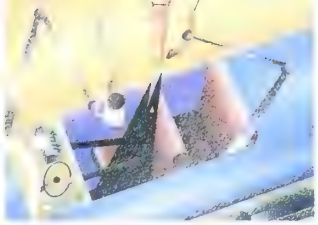




(Top) TRW's remote convenience systems remotely activate locks, anti-theft systems, lights and seat positions.

(Bottom) Conceptual interior designed for driver comfort and convenience.





ENGINE MANAGEMENT

Today's automotive service industry relies on a dramatic growth in the electronic content of transmissions, chassis and suspension systems, instrument panels and engines.

solution. It has developed a sunroof covered with solar cells that generate enough power to run a ventilation fan as long as your car sits outside. In cold weather, the juice from the cells keep your car's battery fully charged for easier startups.

UNDER THE HOOD

Not all smart-car innovations are out where motorists and passengers can see them at work. There's plenty of action hidden away in the engine compartment and under the floor.

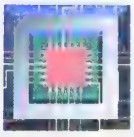
Engine Controls

Virtually every new car on America's roads now carries an electronic engine controller with enough power to put most desktop computers to shame. These "black boxes" analyze exhaust gases, check air and fuel flow, monitor coolant temperature, and control idle.

If your car is equipped with a trip computer, the engine control module supplies it with the data to calculate such things as instantaneous fuel economy and available driving range.

GM

The GM road to Smart Vehicle Service starts here.



It started with a chip in 1980. That's when GM began building small, but powerful computers into every GM car and truck. Today, we're the world's largest producer of automotive computers. We have more computer-controlled vehicles on the road than any other manufacturer. Now, with computer-controlled engines, transmissions, brakes, suspensions, entertainment and comfort systems, theft deterrent and air bag systems, GM vehicles are environmentally cleaner, safer and more comfortable than ever. In short, "smart."

We even created our own computerized "smart tools" in 1985 to link with our on-board computers in performing service checks. Sometimes they're used as "flight recorders" to take snapshots of critical data while the vehicle is underway. Over 30,000 GM "smart tools" are being used in GM dealerships in the U.S., Canada and around the world.

To maintain our leadership, we focus on training "smart people" with the most extensive technician training network in the U.S., including 37 GM training centers and 170 educational centers. Our dealer technicians also earn two-year college degrees in automotive technology.

In 1990 GM dealers began providing our customers with electronic vehicle health checks. Today, many dealers can reprogram the computer in GM cars and trucks right in the service bay.

In the future, GM will continue putting quality on the road with even smarter vehicles and smarter service from your GM dealer.

STG
GM Service Technology Group

SMART CARS AND TRUCKS. SMART TOOLS. SMART PEOPLE.

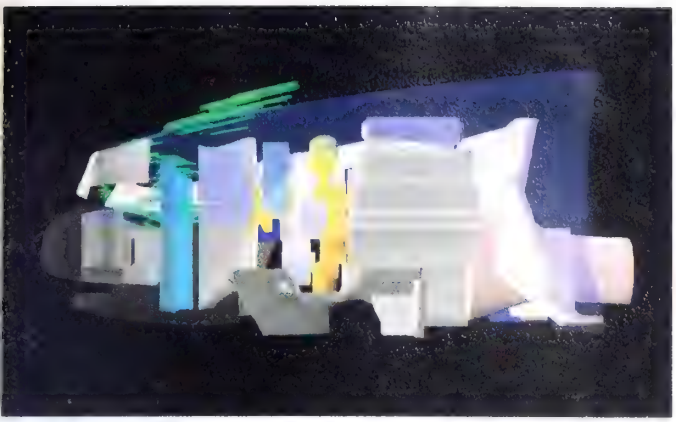
Today's cars have an easier time coping with poor weather when they are equipped with traction control and anti-lock braking systems. Future models may offer collision avoidance and enhanced night vision devices.

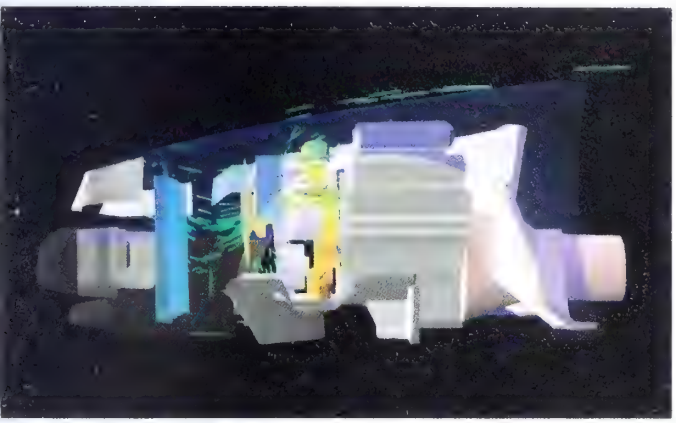
Auto makers began using electronic engine controls a decade ago because computers gave them the fast response and tight control required to meet tight federal emission control standards. Today these on-board information processors also help maximize fuel economy and improve engine performance.

They do even more than that. The units in BMW models, for example, monitor how you drive and calculate when it's time for service. They also adjust idle speed for you between tune-ups so your car always idles smoothly.

Next-generation engine controllers will contain reprogrammable computer chips. They'll allow technicians to update your engine's performance electronically by changing such things as spark timing and fuel metering commands. Chrysler Corp. says it will begin installing such chips in cars by 1992.

Engine computers are also getting smarter. Developers say future controllers will add more tasks and begin to integrate functions now performed separately under the hood. Ford and Motorola are working to develop new chips with perhaps eight





Ford Motor Company engineers are investigating the feasibility of simulating underhood airflow on computers to improve vehicle performance. Adopting technology from aerospace, engineers can see what happens inside the engine compartment as cooling air enters and circulates — offering much greater freedom than actual wind tunnel testing.

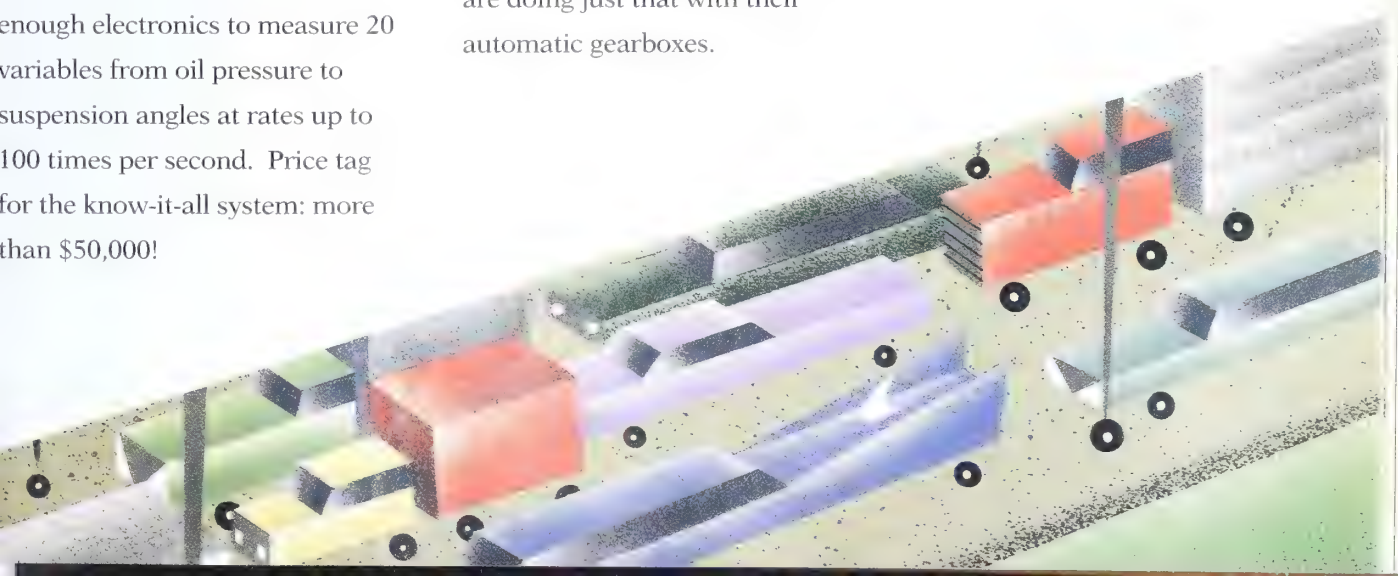
times the capacity of the most advanced engine computer today. Rollout will be before 2000.

How much electronic telemetry is possible? The sky's the limit, if you can pay the price. Some of today's race cars already carry enough electronics to measure 20 variables from oil pressure to suspension angles at rates up to 100 times per second. Price tag for the know-it-all system: more than $50,000!

Electronic Transmissions

If your engine can be managed for peak efficiency by a computer, why not use electronics to do the same thing for the transmission? Several luxury models are doing just that with their automatic gearboxes.

The idea is to monitor such things as engine temperature and acceleration rate, then use the data to decide when the transmission should shift gears. Accelerate sedately, and the system shifts



You want to go where no one has gone before.

This weekend.

If you want to go farther than all the others, consider the vehicle that did just that.

Explorer passed all the rest to become the best seller, the new standard for its class. And, Four Wheeler magazine's "Four Wheeler of the Year."

Nothing in its class has so much overall passenger and cargo room. Or, lets you go from 2WD to 4WD High and back, on the fly, at the push of a button. The 4.0L EFI V-6 and rear anti-lock brakes are standard.

Available amenities include Ford JBL audio systems, 6-way power seats, leather seating surfaces, and a tilt-up open-air roof.

*And now, Ford offers a 36-month/36,000-mile Bumper-to-Bumper warranty with no deductible.**

Explorer has all it takes to go where no one's gone before. And now, so can you.

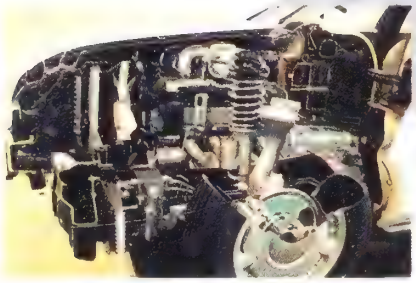
**Ask your dealer for a copy of this limited warranty*

Ford

Have you driven a Ford...lately?

Your Explorer is ready.

Buckle up—together we can save lives.



The Infiniti Q45 is the first production car in the world to offer Full-Active Suspension. This system uses a combination of hydraulics and sophisticated electronics to control body movement.

sooner to maximize fuel economy. Tromp on the gas pedal instead, and the computer orders the transmission to "hold" each gear longer for snappier acceleration.

Conventional automatics do that to some degree. But electronic control is much more precise. That gives you smoother shifts, improved performance, and better fuel economy.

Electronic gear shifting can also be tied into a traction control system. Suppose you "floor it" while cruising down a snow-covered road, for example. Normally, your electronic transmission would oblige by downshifting to a lower gear for more power. On a slippery highway, however, the resulting jolt could trigger a skid. Under those conditions, input from your car's traction control system might overrule the transmission and keep you in the same gear. You'd accelerate slower, but safer.

Adjustable Suspensions

In a conventional car, you ride atop an arrangement of springs that soak up bumps at each wheel. Shock absorbers damp the springs so you don't keep bouncing up and down. And anti-sway bars reduce the amount of body lean your vehicle experiences when it goes around corners.

Getting all those components to work together has always been a tradeoff between ride and control. Engineers had little choice but to pick one set of adjustments, and hope it would work well regardless of driving conditions.

Now that is beginning to change. More and more cars today are being fitted with elec-

tronically controlled suspensions that actively adjust themselves to variations in the roadway.

It began with shock absorbers that could be adjusted from the driver's seat from, say, sporty to soft with the twist of a dial. Then came versions that made such adjustments automatically, firming up the ride to improve control as you drove faster.

What next? Nissan Motor Corp.'s luxury car subsidiary, Infiniti, calls its Q45 luxury sedan the world's first production car with a fully active suspension. Instead of shock absorbers, it uses four hydraulic "actuators" that actual push each wheel into any dips in the road.

The devices can also eliminate rear-end "squat" during acceleration, front-end "dive" during braking, and side-to-side body roll during sharp turns. (Engineers say the system could even be programmed to "lean" into a turn, just as a motorcycle does.)

The Infiniti suspension is controlled by a high-pressure hydraulic system, 10 sensors and a pair of 16-bit computers. One processor minimizes body roll, while the other handles front-rear leveling. Each computer is capable of making thousands of calculations per second.

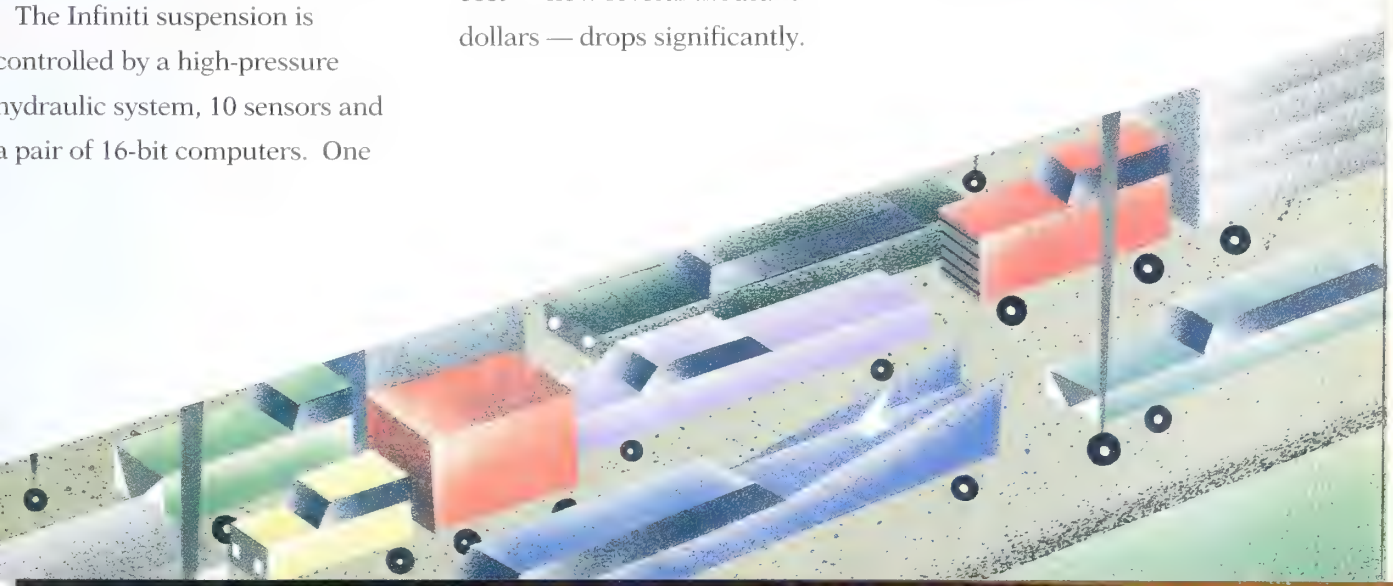
Look for a broader use of active suspensions over the next few years. But don't expect them to become widespread unless the cost — now several thousand dollars — drops significantly.

UTA's newly designed lamp monitor display is in production vehicles for the first time this year. It uses multiplexing to replace conventional wiring with electronics for simplified wiring and diagnostics. Its light emitting diode (LED) indicates when any of eight exterior lights on a car fails.

Smart Wiring

Auto makers are installing more and more features and computers in cars. Unfortunately, room to wire everything together isn't getting any more plentiful.

That's why research is being stepped up on multiplexing, a way to channel several indepen-



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The New LeSabre

Buick LeSabre has earned an enviable reputation for quality. Of course, that didn't stop the people at Buick from striving to make LeSabre even better.

Safer

The new LeSabre offers the safety of anti-lock brakes (ABS), as well as a standard driver-side air bag supplemental restraint.

Roomier

LeSabre's 6-passenger seating now gives you even greater front headroom and rear legroom.

And the spacious trunk is easi accessible, thanks to the new lo liftover design.

Quieter

LeSabre aerodynam new exteri is one design it gets to please bo your eyes ar

ne car that became
y in America?
better.

. Wind noise is reduced to a sper, while special acoustical lation all but banishes road e from the interior.

More Powerful

ne LeSabre's 3800 V6 engine offers even more horsepower. t gets an EPA estimate of 18 s per gallon city/28 highway.

o learn more about the qualities that make the new Buick LeSabre even better, please call 1-800-531-1115.

Or better yet, we invite you to see your Buick dealer and enjoy a test drive today.

BUICK

The New Symbol For Quality In America.

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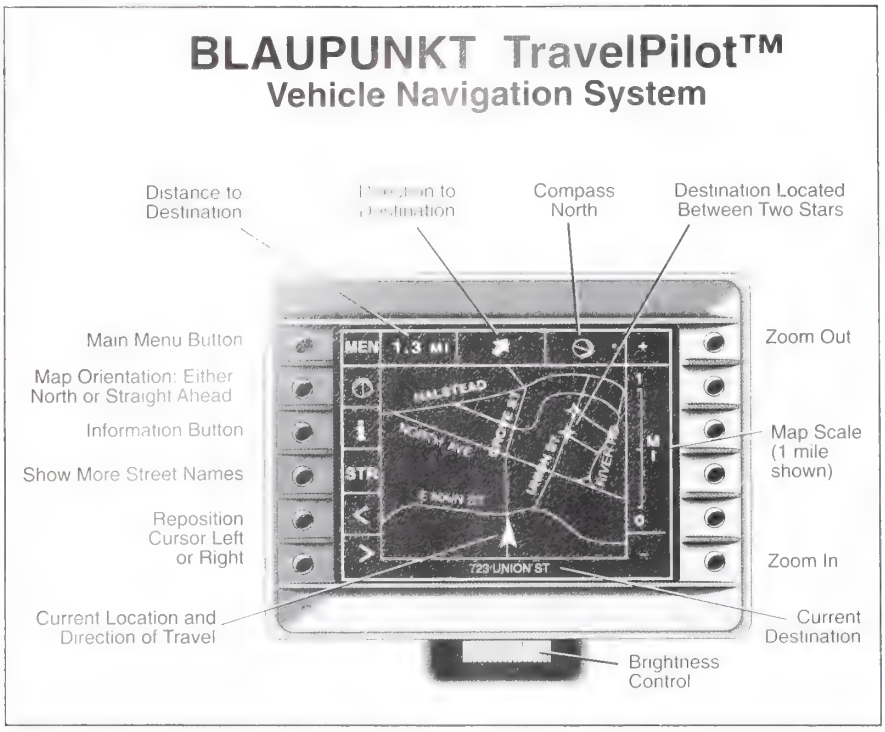
Buckle up, America!



The Blaupunkt Travelpilot™ is a vehicle navigation system designed to help drivers know where they are at all times and to help them find their way to a desired destination.

dent signals through the same line. Several cars use local multiplexing now to reduce the wiring into doors that are equipped with power windows, locks, and mirrors.

Eventually, auto makers say, they may be able to use a few strands of fiber optic cable to weave together the various computers and sensors aboard the cars and trucks of tomorrow. Earlier this year General Motors, Ford, and Chrysler announced a joint research program on multiplexing.

In the meantime, engineers are intrigued by the idea of adding more intelligence to sensors and electric motors — the gadgets that serve as the nerves and muscles of today's car computers. They talk of putting "smart" chips in each device so a car's computers can monitor the health of their own networks.

COMMUNICATIONS

Smart cars aren't just helping their owners drive more comfortably and safely. They're also making it easier to get where you want to go faster and with less hassle. Here's how.

Navigators

Computerized navigation aids have been on the market in Japan for several years. Similar units will be showing up as original equipment in American-made cars within a few years. Experts say they'll be standard equipment — and considerably cheaper than the $3,000-plus price tags typical today — on many cars by the year 2000.

Navigators display color maps on a small television screen mounted in the dash. The maps show you where your car is, and can be adjusted in scope to show one city block or a 100-mile square.

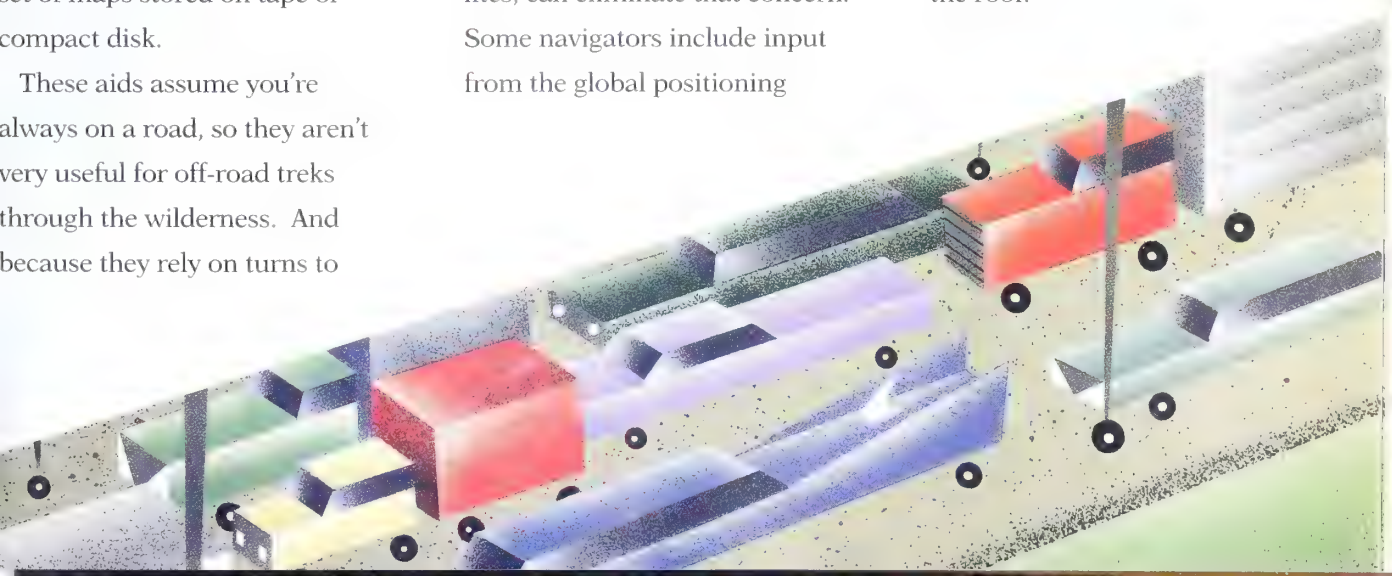
The systems use at least two inputs to keep track of your position. First, they monitor your speed and direction to estimate

While driving, Blaupunkt Travelpilot's™ moving-map display scrolls and rotates under an arrow-shaped cursor just as the road appears to move and turn relative to the car.

where you are at any moment. They also adjust their calculations every time you turn a corner by checking their "dead reckoning" estimate against a set of maps stored on tape or compact disk.

These aids assume you're always on a road, so they aren't very useful for off-road treks through the wilderness. And because they rely on turns to verify vehicle position, they can get confused if your route runs for miles and miles down the same highway.

A third navigational aid, satellites, can eliminate that concern. Some navigators include input from the global positioning satellite system used worldwide by ships and airplanes. Signals from the satellites can be picked up by a flat antenna measuring only 2x2 inches, mounted on the roof.



Of all the car companies in the world, only one lets you choose the car or truck you want...and now, the warranty you need.

OWNER'S CHOICE PROTECTION PLAN

7/70 POWERTRAIN OR 3/36 BUMPER-TO-BUMPER

If there's one thing we all value as Americans, it's Freedom of Choice. With that in mind, Chrysler introduces the Owner's Choice Protection Plan. The way it works is simple. Now buyers of all 1992 Chrysler products can choose between an all new 3-year 36,000-mile bumper-to-bumper warranty. Or our legendary 7-year/70,000-mile powertrain protection.* You won't have a choice, however, on deductibles because there are no deductibles. Basically, all we did was take one of the best warranty programs in the business and made it 100% better. Try getting this kind of choice from any other manufacturer, from anywhere in the world. We think that's Advantage: Chrysler.

ADVANTAGE: CHRYSLER

CHRYSLER · PLYMOUTH DODGE DODGE TRUCKS · JEEP® · EAGLE

See these limited warranties at dealer. Restrictions apply. 3/36 excludes normal maintenance, adjustments and wear items.

The ideal vehicle for people who have to get the job done while on the road has reached the concept stage and is making the US auto show rounds. Aptly named the Desk Drive, it's a Ford Explorer fully equipped with state-of-the-art office and communications gear as well as a Ford JBL sound system, TV, microwave, refrigerator and coffee maker.

Interference from buildings and mountains give a satellite-only navigation system problems of its own. But combined with dead reckoning technology, they can help prevent your car from getting "lost" if it's towed or transported by ferry.

Navigators are more than just fancy TV versions of the crumpled paper map you have in your glovebox. For one thing, they can instantly show you where you are. Punch in your destination, and many will calculate your route. Some will even "talk" you to your target by such audio announcements as "turn left at the next corner."

That's fine as long as you know where your destination is, but what if you don't? Just such a situation might arise if you're driving to a meeting at an address in an unfamiliar city. There'd be no problem if your vehicle was using navigation technology developed by Etak Inc. of Menlo Park, California.

The Etak system works off a series of digital maps. You simply enter an address, and it shows you where it is — and where you are in comparison. Similarly, the unit could be used to find the nearest Holiday Inn or Amoco gas station.

Etak marketed its first-generation navigation system for $1,000 through auto stereo shops in the mid-1980s. It also licensed the technology to GM.

Now a much more sophisticated version is being sold in California, Hawaii and Nevada by Bosch as the Blaupunkt Travelpilot™. New regions will be added as the necessarily digital mapping is completed. Travelpilot retails for $3,495, not including installation.

Phone Systems

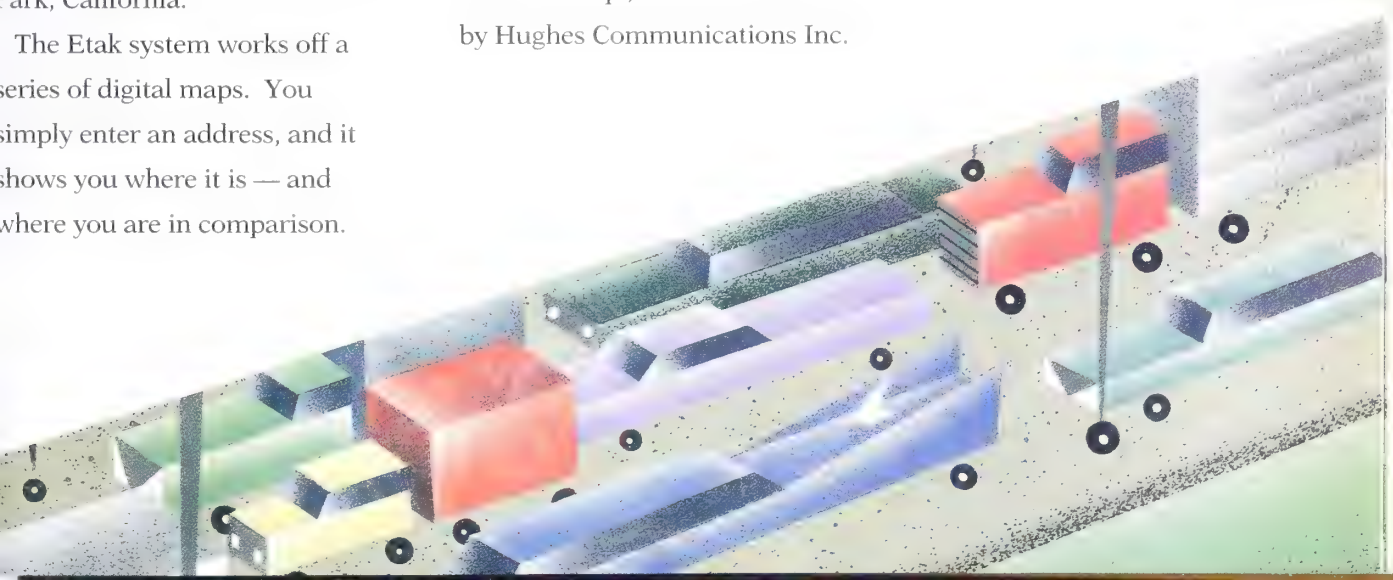
Like 'em or not, cellular telephones are here to stay. The next wrinkle: A satellite-based network that will let you call from anywhere in the country, no matter how remote the location.

The system will be offered in 1994 by the American Mobile Satellite Corp., a consortium led by Hughes Communications Inc. HCI says the network — intended for use by ships, planes and emergency vehicles as well as ordinary motorists — will serve Canada, the United States, Mexico and all the coastal waters of North America.

The network will use two satellites orbiting at 22,300 miles above North America. Placed in geosynchronous orbit, the spacecrafts will appear to float in one spot, delivering uninterrupted service around the clock.

Displays

Tomorrow's smart cars are all but certain to use formattable video displays in place of today's array of dials and gauges. Jack Haze, sales/marketing manager for Panasonic's Automotive Industrial Group in Plymouth, Michigan, predicts some auto makers will eventually use a single, three-screen cluster for all their models. Switching chips

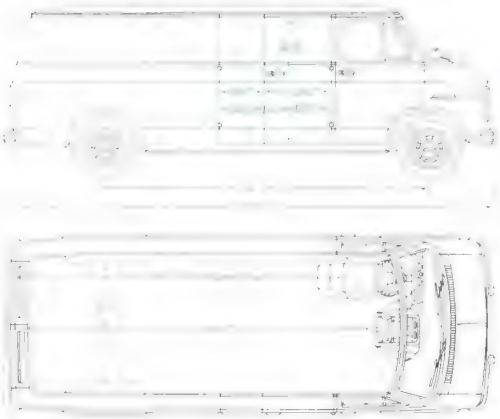


Supply Side Economics From America's Longest-Lasting Trucks.*

Reliable Supply. Economical Upfitting.

If you need it now, we've got it for you. Full-size Chevy Vans are in full production right now, with no potential start-up glitches for you to worry about.

Economical upfitting, too. There's no costly interior redesign required. Chevy Vans' interior dimensions remain the same.



And full-size Chevy Vans give you other advantages, too. With more maximum cargo room than competitive vans from Ford or Dodge. Plus the important assurance of GM's new no-deductible 3-year/36,000-mile Bumper to Bumper Plus Warranty.† And over the years, Chevys have proven to be America's longest-lasting trucks.* Chevrolet. The trucks you can depend on. The trucks that last.

For more details on Chevy's advantage, talk to us. The industry's biggest fleet sales and service organization is ready to assist you. Call Chevrolet Fleet Sales, at 1-800-248-2897.

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The Heartbeat Of America Is Winning.™

TODAY'S FLEET COMPANY IS CHEVROLET.

Drivers of the 1992 Pontiac Bonneville SSE and SSEi models can keep their eyes on the road and still view pertinent data thanks to Delco Electronics Corporation's Head-Up Display (HUD).

will allow them to customize the displays with different colors, analog versus digital readouts, and so on.

Such displays are likely to show only such necessary data as speed and fuel level under normal operating conditions. They'll "interrupt" with other information — about low tire pressure, for example — as needed or requested by the driver.

A second screen will report on other car systems such as navigation, climate control, sound system, and trip data. Oldsmobile pioneered the use of touch screen displays in its 1989 Toronado, but the use of TV screens to display primary driver information is still a few years away.

Another space-age technology that's already upon us is the so-called head-up display. HUDs are

Teletrac provides 24-hour vehicle security service for consumers who want to protect their cars from theft. This vehicle security service locates a car the minute it is hot-wired through a small unit hidden in the car which emits a signal. Teletrac staff works with the police agency of jurisdiction to aid recovery. Currently serving Los Angeles and counties south, Teletrac plans to expand its services to 24 metropolitan areas.

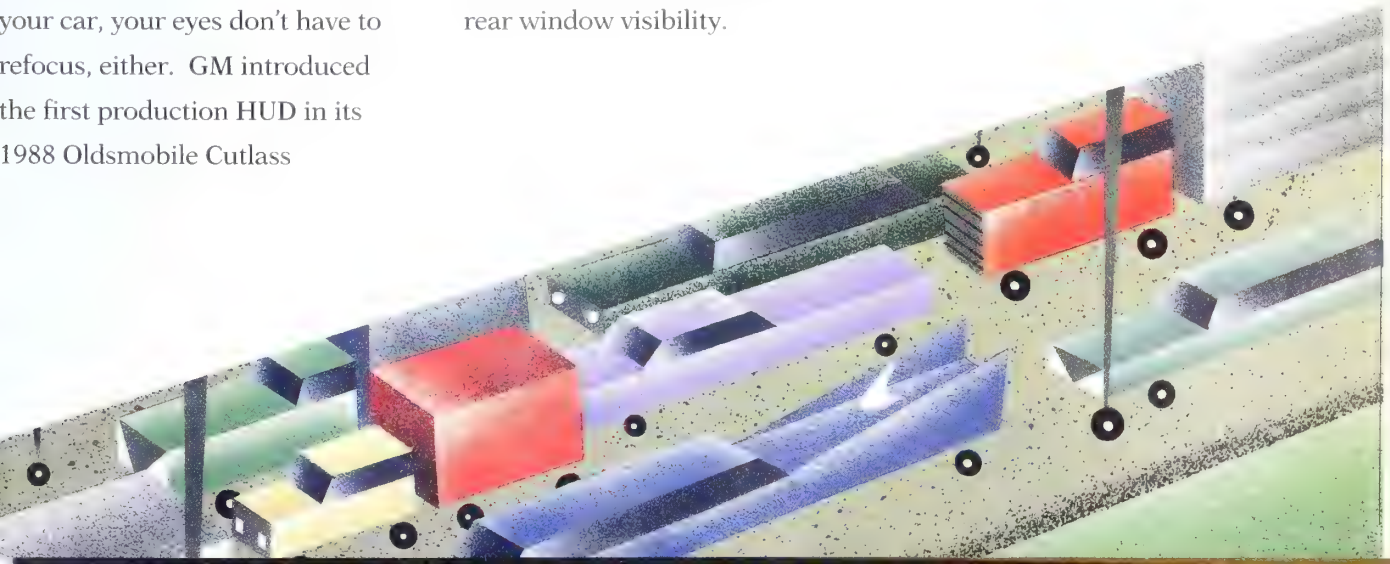
commonly found in jet fighters, where they project flight information onto the canopy so pilots can read their instruments without taking their eyes off their targets.

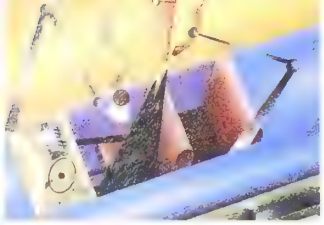
Applied to cars, a HUD allows you to check your speed or turn signal indicators without lowering your eyes. And because its image seems to hover ahead of your car, your eyes don't have to refocus, either. GM introduced the first production HUD in its 1988 Oldsmobile Cutlass Supreme. You'll find a next-generation design in the 1992 Pontiac Boneville SSEi.

GM is also experimenting with a holographic device to take the place of today's center-mounted brake light. The objective: To provide the safety of the extra warning light while eliminating the usual housing which reduces rear window visibility.

Vehicle Locators

Worried about having your car stolen? There are dozens of anti-theft systems available to help thwart thieves, including many good systems that can be installed at the factory when you order your new car or truck.





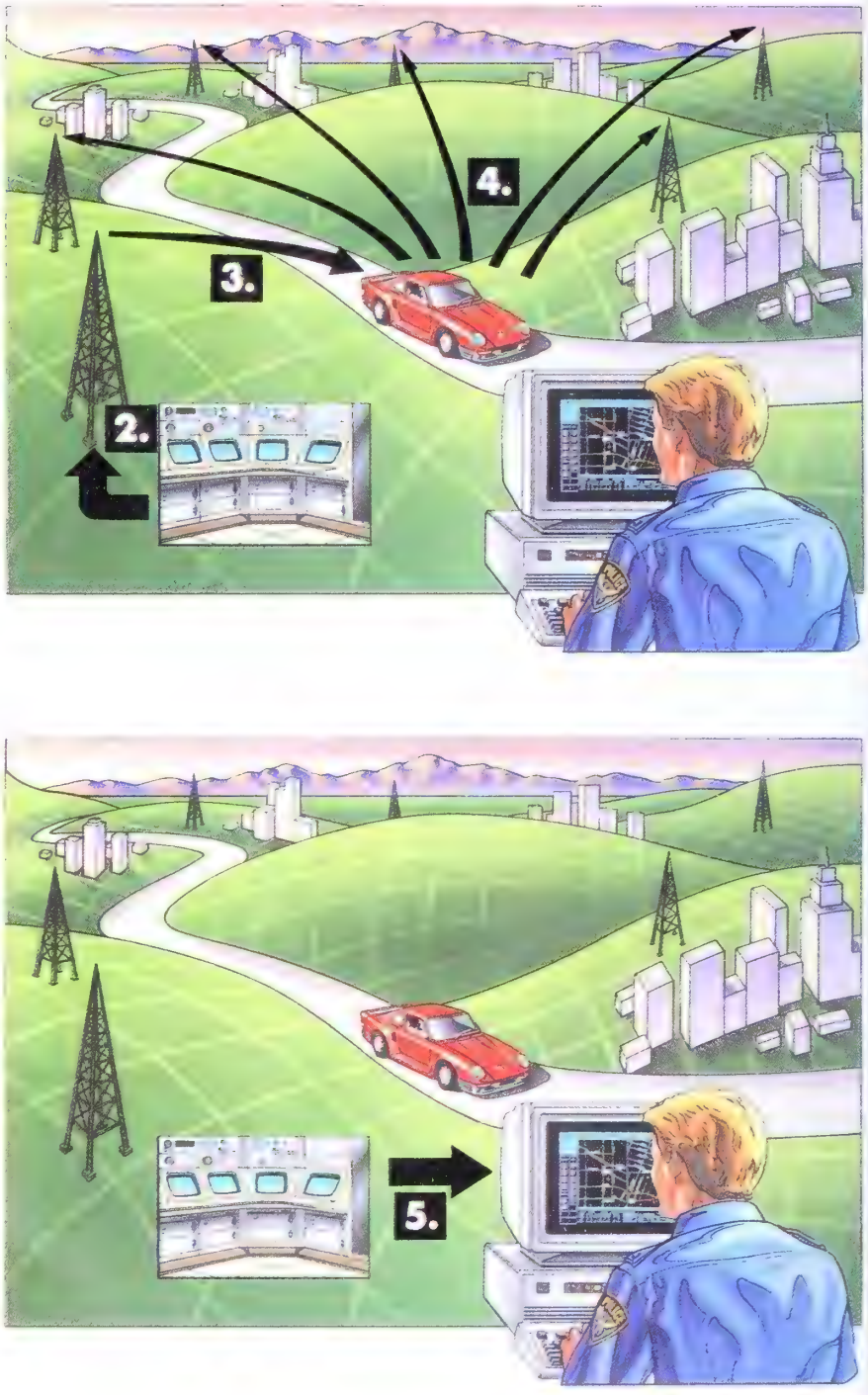
Some of these alarms come standard, while aftermarket units may cost anywhere from a few hundred to several thousand dollars.

One of the newest wrinkles in anti-theft gear doesn't prevent auto theft at all. Instead, it helps police find your vehicle after it's taken. Lo-Jack (about $595) hides a small radio beacon in your car that can be activated by police departments if you report the vehicle stolen. But departments must have special tracking equipment to trace your vehicle.

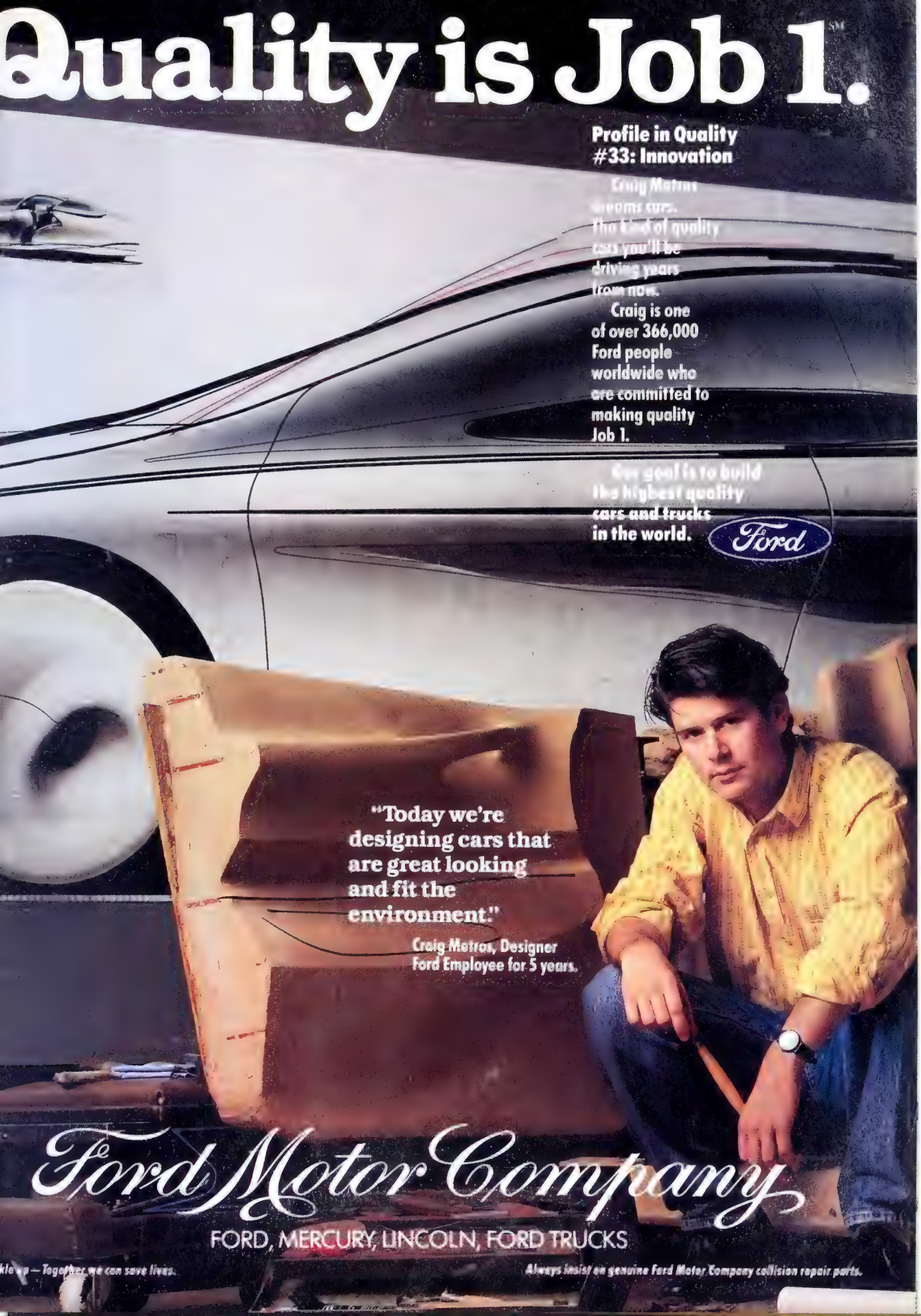
A newer system takes another, more sophisticated approach. International Teletrac Systems of Inglewood, California is rolling out a system ($599 to $699, plus $12-$16 per month monitoring fee) that actually tracks a stolen vehicle automatically.

Like Lo-Jack, Teletrac relies on a hidden transmitter in your car. But Teletrac uses its own network of receiving antennas in your metropolitan area to do the tracking whenever your car is started without a normal ignition key.

If that happens, the transmitter alerts a local Teletrac control



When a car is hot-wired, Teletrac's vehicle locator unit (VLU) installed in the car transmits emergency signals. Teletrac control center receives the signals and then instructs paging transmitter to send activation signals to the VLU (2). Paging transmitter instructs VLU to send spread spectrum location signal (3). VLU sends signal to the control center (4). Control center calculates vehicle location information (5).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#33: Innovation
Craig Metros
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The kind of quality
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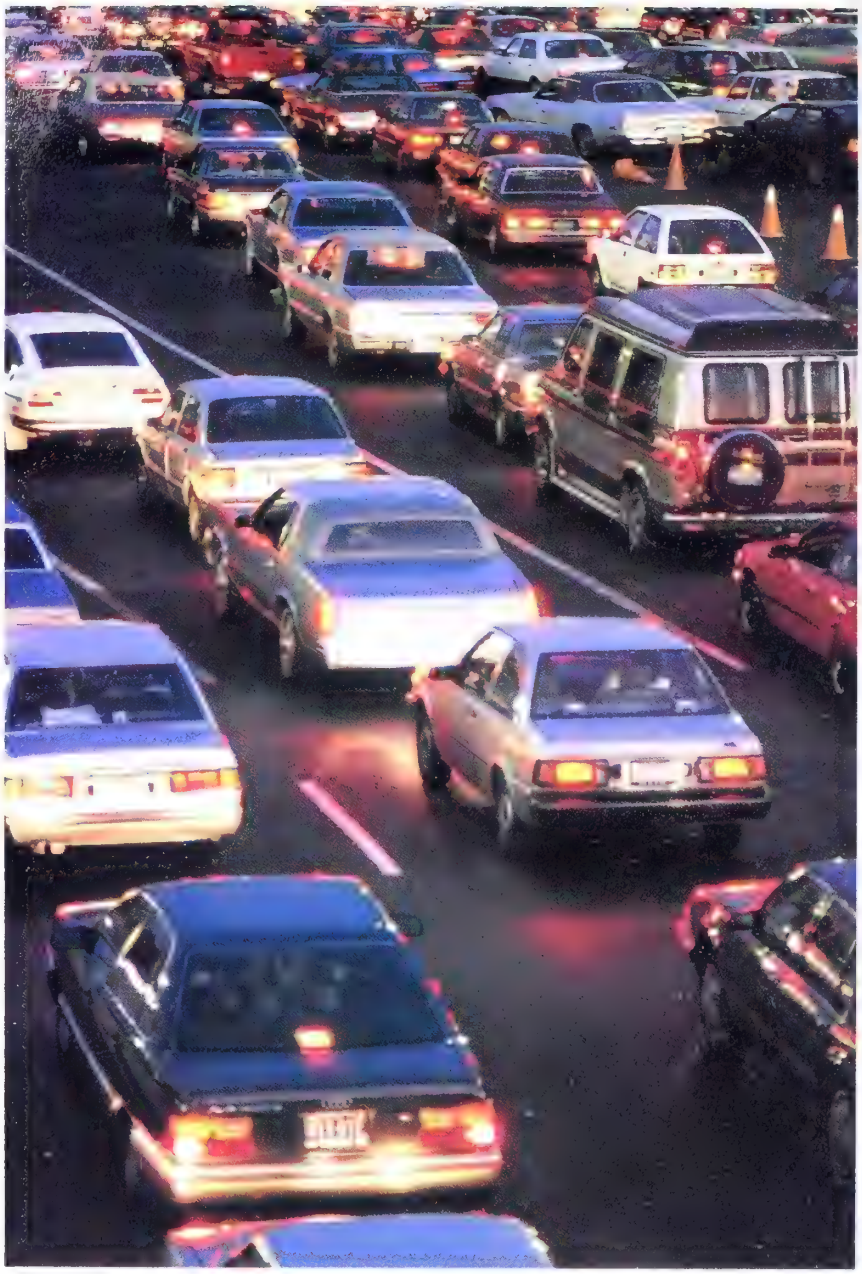
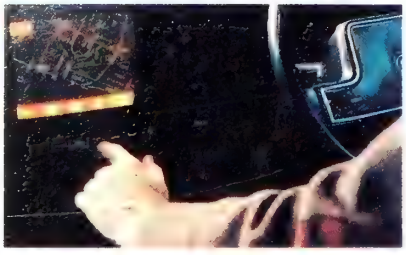
Always insist on genuine Ford Motor Company collision repair parts.

(Right) Federal transportation studies say traffic will double in volume over the next 30 years. Without better coordination of traffic flow, experts warn, it could take five times as long to travel by highway in 2020 as it does today.



(Below) The solution may be "smart streets" that feed data to on-board displays which show drivers how to avoid tie-ups.



center, which uses its antenna grid to plot your car's route on a computerized map. The center alerts the proper police department of a possible theft even before you know your car is gone. It can also supply cruising police cars with up-to-the-second information about where a thief is taking your vehicle.

The Teletrac system, which uses Etak's digital mapping technology, has more uses. A "roadside assistance" feature includes a button you push if your car breaks down. That alerts the Teletrac command center you're in trouble and tells

it where you are. The center then dispatches a tow truck automatically. And fleet operators can use a variation of the system to tell where their delivery vehicles are 24 hours per day.

Teletrac debuted in Los Angeles late last year, and has been introduced in Chicago, Detroit and Dallas this fall. A host of additional metropolitan areas are scheduled to add the service in 1992.

SMART STREETS

As cars get smarter, can smart streets be far behind? Not if traffic engineers have anything to say about it. They're working on various traffic management systems collectively known as "intelligent vehicle/highway systems," or IVHSs.

Europe, where urban traffic crawls along at less than 10 m.p.h. on average, has taken the lead. It is midway through a seven-year project called Prometheus it hopes can unclog streets and highways. The program would monitor traffic flow, use on-board navigation computers to guide drivers along fastest routes, equip vehicles so they can warn each other about problems, and develop vast centralized control networks to help direct traffic.

Similar efforts have begun in Japan. Research has also started in the United States, though more modestly. Last year GM tested a dozen cars in Los Angeles that were equipped with devices to advise drivers of alternate routes when freeway traffic backed up.

This summer Motorola Inc. launched a five-year project called ADVANCE, short for advanced driver and vehicle advisory navigation concept, to do the same for 5,000 specially outfitted cars in Chicago in 1993. The Motorola system includes a voice synthesizer to give drivers verbal directions.

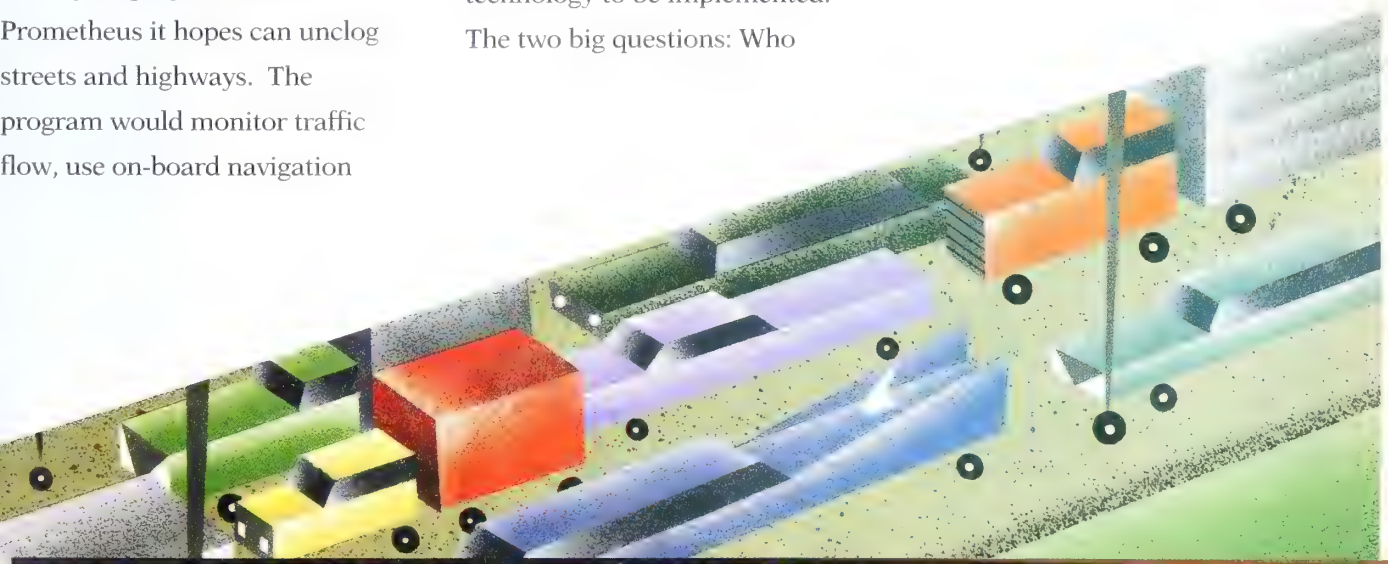
City dwellers don't have much trouble seeing the potential in such systems. But don't hold your breath waiting for the technology to be implemented. The two big questions: Who will pay for all the traffic sensors and broadcasting equipment needed to make them work? And how much will the on-board hardware cost consumers? At this point, nobody knows.

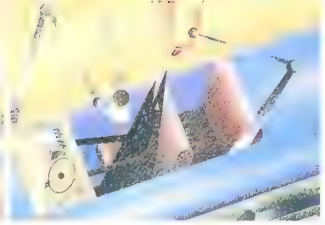
SUMMARY

There's no question that cars and trucks are getting smarter. But the cost? That will be determined primarily by the price of new sensing equipment, not computing power. Even that cost is beginning to plateau, as one new system becomes able to "borrow" the sensors of another.

The payoff for consumers will be cars and trucks with higher safety, more convenience and greater comfort. And they'll be able to operate those vehicles with less stress. It's a smart bargain.

William J. Hampton is based in Detroit and has reported on the auto industry for various publications since 1971.





STREET SMARTS

Here's a quick traffic quiz for people who do their commuting by car:

- Does it seem to take you longer and longer to drive where you want to go?
- Have you noticed traffic is heavier, even during off-travel periods?
- Is it getting tougher to make a left at that traffic light on the corner?
- Do you feel like everyone else has discovered your favorite shortcuts?

If you answer "yes" to any of the above questions, you're ready for smarter streets.

The concept is simple enough: Load up streets and highways with sensors that monitor traffic, boil down the data into up-to-the-minute reports, and feed the information to motorists as they drive.

The experts call them intelligent vehicle highway systems, or IVHSs. More than a dozen variations of such networks are being tested all over the world right now. The details of each system vary dramatically. But the objective — to smooth traffic flow — is the same.

The potential market for IVHS equipment is huge. Siemens Automotive estimates it will reach $5 billion in the United States alone by the end of the 1990s. It figures the market will multiply three-fold in the early part of the next century.

Most systems include electronic maps or indicators for cars. The devices tell drivers when and how to take alternate routes. Others measure traffic volume, adjusting the timing of street signals to maximize flow.

IVHS is no scheme cooked up by computer salesmen with nothing better to do. To hear the experts tell it, we may have no choice but to let our roadways start telling us where to go.

According to the U.S. Department of Transportation, traffic volume will double its present level by the year 2020. By then, DOT estimates, it could take you five times as long to travel a stretch of freeway as it does today.

Average speeds around town are also dropping. In some metro areas, they're already dipping close to the 9 m.p.h. average for Europe's big cities.

It's not just the inconvenience of slower travel that worries planners. All those delays also mean billions of gallons of wasted fuel — and greater air pollution at the same time.

The good news is that everybody will benefit from IVHS, even if most of us don't drive cars equipped to use it. Experts say congestion can be eased significantly when just one car in 10 carries traffic monitor equipment.

That's just as well since nobody expects smart streets to take over the nation anytime soon. A survey by the University of Michigan identifies no less that 10 variations of IVHSs, and says all of them will be ready for demonstration by the end of the decade. On the other hand, says the study, widespread use of these systems could be 50 years away.

Just figuring out how to make all the alternative systems compatible will be a big headache.

In the meantime, high cost will slow the implementation of smart streets. Siemens Automotive, which expects to begin tests of an IVHS it calls FAST-TRAC outside Detroit in December, figures it will cost $100 million to implement the system in one surrounding county alone.

That may be cold comfort the next time you're stuck in a traffic jam. But at least you'll know help is on the way.

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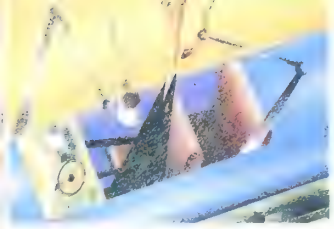

NEWS FROM THE ENGINE ROOM

When it comes to how we power our cars, there hasn't been much news since the internal combustion engine took over more than 80 years ago.

But now technology is brewing up interesting alternatives under the hood.

Major auto makers are beginning to take electric cars seriously. They're finding new ways to perk up the same old piston engines. And they're looking hard at an automotive version of the "two-stroke" powerplant used in chain saws and outboard motors.

Call it a quest for cleaner air. Or a search for improved fuel economy or both.

Dabbling with alternate power sources is nothing new for Detroit, of course. The industry's last serious look came in the early 1970s when carmakers experimented with everything from turbines to steam engines.

But vehicle manufacturers came up empty-handed. The biggest problems: poor performance and high costs. Meanwhile, the industry learned how to squeeze higher and cleaner performance from the trusty four-stroke piston engine.

Today, auto makers are taking another look at their options. In some regions poor air quality is all but mandating alternatives to the internal combustion engine. The most attractive backup: electric cars.

General Motors Corp. hopes to be first to market with its Impact electric. The stylish four-seater accelerates smartly, has a top speed of 75 m.p.h. and can cruise 120 miles at 55 m.p.h. GM plans to begin building the impact in Lansing Michigan, a few years from now.

Short range and long recharging times have been one of the major shortcomings of electric cars. Nissan Motor Co. says it has cured the second problem with a new battery that can be recharged in only 15 minutes.

GM's Impact needs several hours to recharge. But GM, Ford and Chrysler have formed the United States Advanced Battery Consortium to develop still more advanced energy sources for electric cars.

Not that auto makers are giving up on piston power. On the contrary. Virtually every major manufacturer is looking at two-stroke piston engine designs like the ones used in outboard motors, weed trimmers and chain saws.

Such engines get their name from their ability to perform all four cycles in internal combustion — intake, compression, ignition and exhaust — in only two piston strokes. The piston engines in conventional cars require four strokes.

Two-stroke engines are lighter, smaller and more powerful per pound than four-stroke engines. That translates into better fuel economy. It would also mean much smaller engine compartments and more aerodynamically designed cars.

But controlling emissions from two-stroke engines is tricky. Auto makers say they are still not satisfied that the technology will meet current, let alone proposed, federal emission standards.

While they continue to tinker with two-stroke engines, car companies are also wringing more performance from the venerable four-stroke engine. Honda and Mitsubishi have each introduced "lean burn" engines that promise high fuel economy by coaxing combustion from leaner-than normal air/fuel mixtures.

Honda debuted its lean-burn engine this fall in the 1992 Civic VX. The car gets roughly 45% better city fuel economy than this year's Civic. But lean-burn technology, studied extensively by Ford in the mid-1970s, seems to work well only in very small engines. Even Honda and Mitsubishi aren't planning to use their systems in bigger cars.

MAN: What impresses me most about this Eagle Talon is its intercooled turbocharger, anti-lock brakes, and four-wheel independent suspension.

OFF-CAMERA VOICE: Then you're obviously familiar with these parts?

MAN: Yeah, I've lived here my whole life.

(MUSIC)

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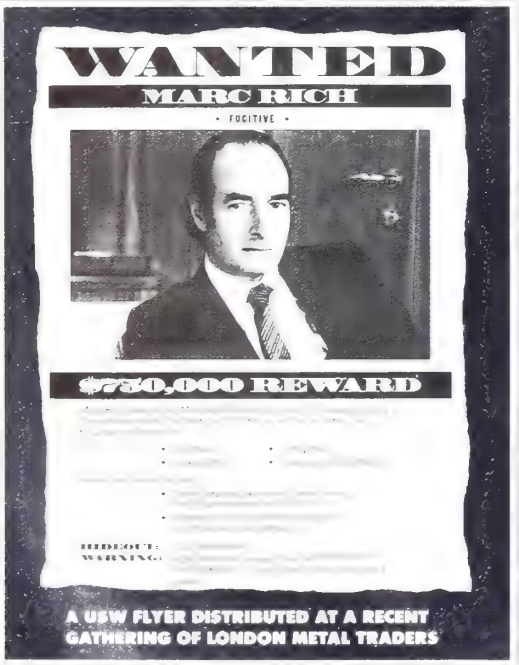
MAKING MARC RICH SQUIRM

The Steelworkers could hinder his attempts to return to the U.S.

Four officials of the United Steelworkers got a nasty reception on Oct. 8, when they crashed the annual shindig for traders on the London Metal Exchange (LME). As the unionists handed out "Wanted: Marc Rich" posters to black-tie guests at London's fashionable Grosvenor House Hotel, four men emerged from a black BMW and threatened to "hurt" the leafleters if they didn't withdraw, claims Joseph B. Uehlein, one of the USW four. The next day, two of the Americans say, their hotel rooms were entered and searched.



A USW FLYER DISTRIBUTED AT A RECENT GATHERING OF LONDON METAL TRADERS

What beef does a U.S. union have with Rich, a commodities whiz who controls a $30 billion-a-year trading operation in 40 countries? The USW claims Rich is an influential absentee owner of Ravenswood Aluminum Corp., a private West Virginia company that's locked in a violent labor dispute with 1,700 USW members. The union has picketed his six-story headquarters in Zug, Switzerland, enlisted the aid of European unions, and called for a congressional investigation of Rich's U.S. government contracts.

These are standard tactics in labor disputes—and ordinarily about as bothersome as a gnat to someone of Rich's estimated $3 billion net worth. Except for this: Rich has wanted to return home ever since he fled the U.S. eight years ago, just ahead of a 65-count federal indictment for criminal tax evasion and racketeering. Because his ailing mother lives in Manhattan, as does his estranged wife, Denise, who recently returned with the youngest of their three daughters, he has recently stepped up these efforts.

Indeed, Rich's lawyers, including Washington's Leonard Garment, make regular overtures to the Justice Dept. "to negotiate terms of his surrender," says a Justice official. That's a matter of some urgency, because the U.S. government is offering a $750,000 reward for Rich. And because the USW dispute is dragging Rich back into the limelight—and providing an unusual look at his secretive U.S. empire, which has rarely been scrutinized before.

Born in Belgium, Rich moved to the U.S. with his family in 1941 at the age of eight. In 1954, he joined Philipp Brothers Inc., a leading commodity trader. Credited with developing the independent spot market for oil in the early 1970s, Rich later started his own company, which grew to $10 billion in sales.

Then, in 1983, his troubles began. The U.S. Attorney's office in Manhattan indicted Rich, his partner Pincus "Pinky" Green, and Marc Rich & Co. on charges of rigging a huge, illegal oil-pricing scheme, evading $48 million in taxes, and illegally buying oil from Iran during the 1979 hostage crisis. Shortly before the indictments, Rich claimed to have sold his U.S. operating arm, Marc Rich & Co. International Ltd., to Alex Hackel, an unindicted partner in Switzerland. The company was renamed Clarendon Ltd., and another unindicted Rich employee, a top aluminum trader named

Willy R. Strothotte, was made chief operating officer and later, president.

The new entity seems to have existed in name only. The judge hearing the indictments called the maneuvers a "ploy" to avoid the $50,000-a-day fine he had slapped on Rich's U.S. company. He noted that Clarendon employed the same people as before and was still headquartered in Rich's offices in Zug—as it is today. Ultimately, Rich paid the fine as part of a $171 million settlement of civil charges against Clarendon.

CLEAN FACE. Ever since, Clarendon officials have insisted that Rich no longer controls the company. They have good reason to do so: Rich's indictment drove away customers, say federal prosecutors in the case. By distancing himself from the company—he still owns 49%—Rich gave Clarendon a clean face. Then, he used it to expand vigorously in the U.S., first in commodity trading and subsequently, in aluminum production.

The first major step came in 1986, when Clarendon signed a 10-year agreement to buy all 800,000 tons of alumina produced annually by a Jamaican company. Clarendon sells most of the semi-refined white powder, which is used in smelting aluminum, to major U.S. producers. Then, Clarendon got into smelting. It took a part ownership in at least four smelters, then signed agreements for each to process alumina that Clarendon supplies. These were often sweet deals. For instance, Clarendon paid a reported $40 million to buy 27% of an Alumax of South Carolina Inc. plant in Mt. Holly, S.C. Clarendon's share of output

RALLYING IN RAVENSWOOD: A WARNING TO OTHER STEELMAKERS

45,000 tons of aluminum a year. Analysts say a smelter to produce that much would cost about $220 million to build.

With such deals, Clarendon bought major positions in the U.S. aluminum industry. Today, it controls more than a third of the world market for independent primary aluminum and alumina, according to major rivals. "You cannot do business in the aluminum industry without doing business with Marc Rich," says a senior Alcan Aluminum official.

As Clarendon expanded, it spawned a labyrinth of subsidiaries and partly owned companies (table). Prosecutors say, it insulating the fugitive executive from notice of his U.S. activities. Take Ormet Corp., Clarendon's next big investment after Mt. Holly. Ormet was an alumina and smelting operation jointly owned by Revere Copper Products Inc. and Alusuisse, a Swiss aluminum company. In 1986, an investment group including Strothotte bought the company for a cheap $98 million. Clarendon used a similar approach in early 1989, when Strothotte and others bought Ravenswood, then a unit of Kaiser Aluminum & Chemical Corp.

The Ormet investors joined forces again, including R. Emmett Boyle, the former president of Ormet, who became Ravenswood's chairman; Stanwich Partners in Stamford, Conn.; and Rinoman Investment in Amsterdam. Rinoman, which owns 48% of Ravenswood, is 100% owned by Strothotte, Clarendon's president.

There are other links between Ravenswood and Rich. Clarendon supplies Ravenswood with most of its alumina. Clarendon also buys some aluminum produced by Ravenswood. The acquisition from Kaiser, for $170 million in cash and $180 million in assumed liabilities, was financed with a $205 million loan from Ridgeway Commercial, a Swiss affiliate of Clarendon. The investors also lined up a $140 million line of revolving credit led by Amsterdam's NMB Postbank, which regularly does business with Rich. "It's understood that Rich is behind the ownership [of Ravenswood and Ormet], although I never knew him to get involved in the management," says Thomas J. McGinty, who sold his 29% Ormet stake to Strothotte in 1989.

'NOBODY'S PUPPET.' Boyle adamantly denies that Rich is connected to Ravenswood. He argues that Rinoman is simply Strothotte investing as an individual. "I resent anybody saying I'm a puppet" of Marc Rich, Boyle snorts. "I'm nobody's puppet. I run this company." Rich himself declined to discuss the issue. A letter BUSINESS WEEK sent to him in Zug elicited a response from Robert Thomajan, a New York lawyer on leave from his firm to work for Rich in Zug. Thomajan says Rich's company "has not and does not comment publicly on its business activities."

Strothotte sent BUSINESS WEEK a letter, faxed from Rich's Zug headquarters, denying any "ownership link" between Ravenswood and Clarendon or Rich. Strothotte also says that "efforts by the [USW] to involve Clarendon and its shareholders in a resolution [of the Ravenswood dispute], their conduct at the LME dinner, and the rather absurd reference to threats are all misdirected and serve no useful purpose." In response to a second query, he issued further general denials but did not reply in detail before this issue went to press.

The USW concedes that Boyle is the primary architect of Ravenswood's labor policies. The friction began when the company's labor contract expired a year ago. After Boyle demanded pay cuts, talks over a new pact deadlocked. Boyle then locked out union members and hired 1,100 replacements.

Since then, there have been hundreds of acts of vandalism and clashes between Ravenswood security

MARC RICH'S TANGLED U.S. EMPIRE

Marc Rich has expanded his U.S. operations ever since he fled the country in 1983 ahead of a 65-count indictment.

His holdings are controlled through a labyrinth of subsidiaries and partly owned companies

MARC RICH & CO. HOLDING Based in Zug, Switzerland, with $30 billion in sales

CLARENDON LTD. Holding company for U.S. operations, 49% owned by Marc Rich & Co., based in Zug with offices in Stamford, Conn. *President:* Willy R. Strothotte

RINOMAN INVESTMENT CO. Clarendon affiliate owned by Strothotte. Owns 48% of Ravenswood

BERKELEY ALUMINUM INC. Clarendon affiliate based in Stamford, Conn.

ORMET CORP. Aluminum producer in Hannibal, Ohio. Clarendon owns 6% and controls part of its output

RIDGEWAY COMMERCIAL Clarendon affiliate based in Hergswil, Switzerland, supplied $205 million for Rinoman's purchase of Ravenswood

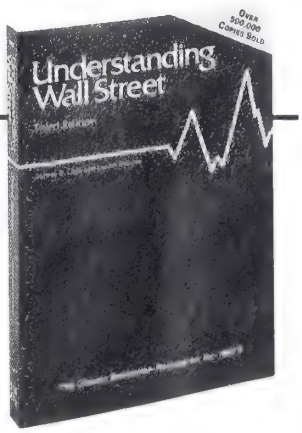
ALUMAX INC. Aluminum smelter in Mt. Holly, S.C., 27% owned by Berkeley. Clarendon controls 75% of its output

RAVENSWOOD ALUMINUM CORP. Aluminum producer in Ravenswood, W. Va.

DATA BW

PHOTOGRAPH BY GARY TRUMAN

How "Street Smart" Investors Get That Way...



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guards and USW members. Boyle ha spent more than $1.5 million to forti the plant, ringing it with tractor-trailer railcars, and a 10-foot-high barbed-wi fence. The union has spent an estimate $11 million on its campaign, large strike benefits.

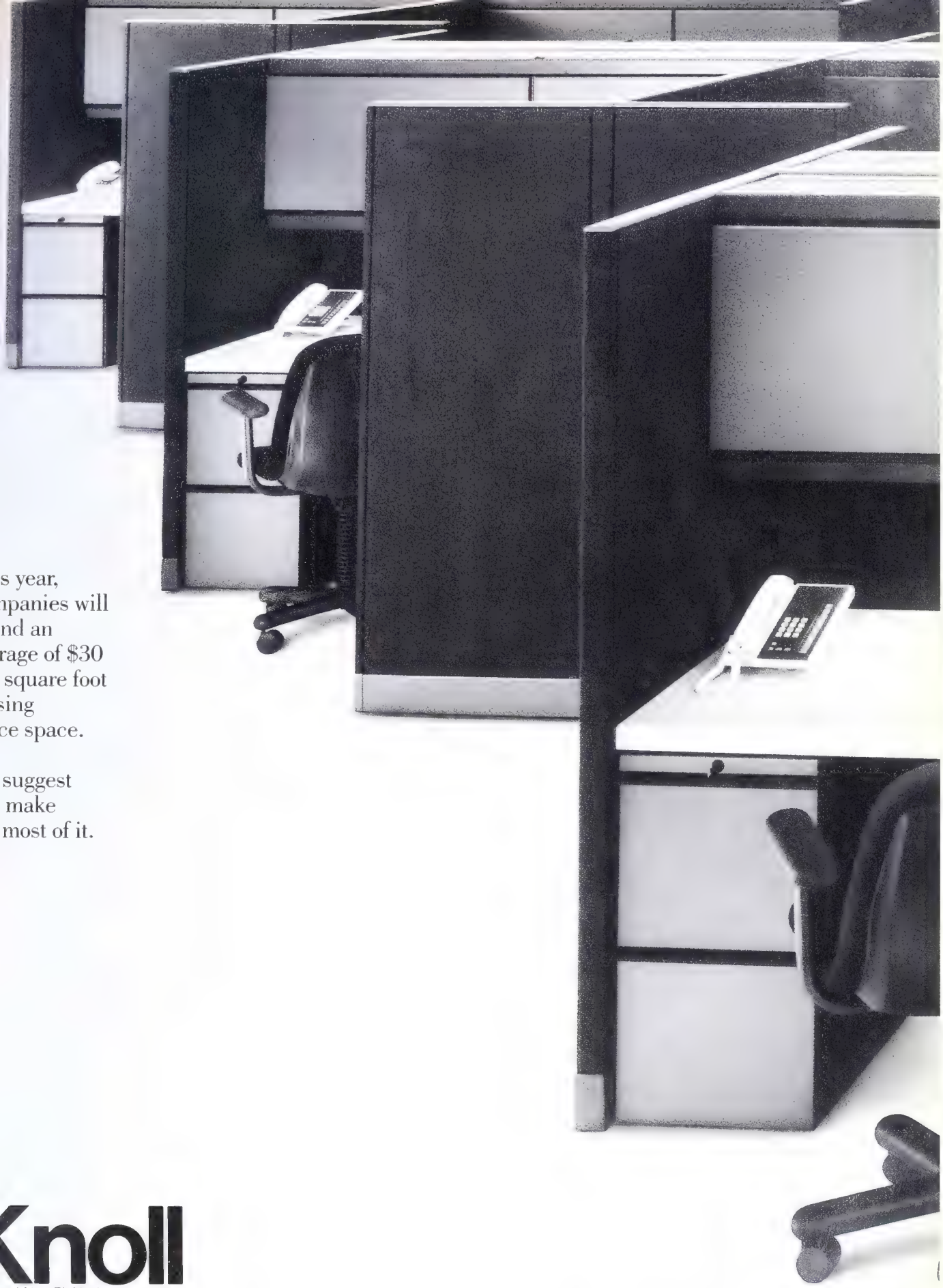
Insiders say the USW wants to send message to other aluminum and ste producers not to try the same thing. I deed, they may now think twice. "Th two sides are in a death grip," says P ter W. Merner, an aluminum analyst Merner Research. USW President Lyn Williams says he recently persuaded R venswood's biggest customer for alum num-can sheet, American National Ca to cancel future orders that represe 23% of Ravenswood's sales. Boyle deni this. American National won't commen

LONG ROPE. The USW also hired a priva investigator to look into Ravenswood tangled ownership—which is what led to Rich. To rope him into the dispute, t union complained to Representative Bo Wise (D-W. Va.), whose district includ Ravenswood. Now, Wise's subcommitt on government operations is investiga ing allegations that Rich & Co. ma have traded in Iraqi oil during the Pe sian Gulf war. This would have violate both U. N. sanctions and Swiss law. E ropean unionists are also attackin They're trying to thwart Rich's attemp to buy Slovak State Aluminum Co. An pro-union politicians in the Europea Parliament have questioned his ethics.

Rich's lawyers continue to press f his return to the U. S., offering to pa multimillion-dollar fines he still owe Rich's one condition is that he avoid pri on. He may have allies in the State Dep U. S. marshals have tried several time to trap Rich, most recently in Septe ber, when they alerted officials in Fi land that he was due to arrive by priva plane. But in that instance, as in prev ous ones, Rich got away. A. Craig Cop tas, author of a 1985 book on Rich, sa the marshals suspect that someone State, which must be notified of suc operations, is leaking their plans to Ric because they value his high-level co tacts around the world. The Justi Dept., however, "will never make a de that will let Rich buy his way out of possible prison term," says Morr "Sandy" Weinberg, a former U. S. pros cutor who led the case against Rich.

Implicit in the USW's strategy is that Ravenswood is settled, the spotlight o Rich will go dark. Maybe so. But it's ju as likely that, win or lose, the union h ensured that the fugitive from Ne York will long remain a prisoner in Zu

By Michael Schroeder and Mar Mallory in Pittsburgh, with John Templ man in Bonn



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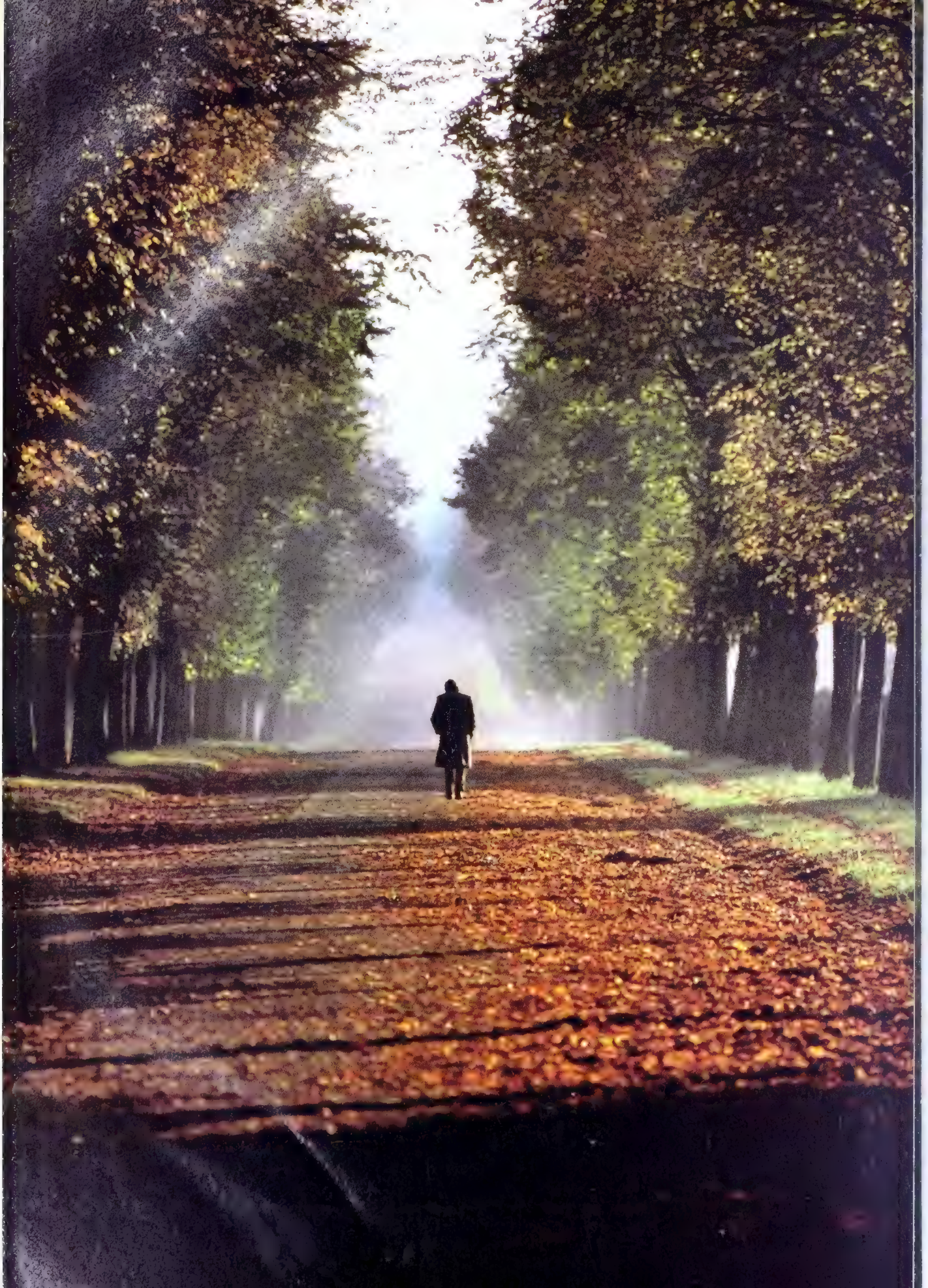

Like a small child,
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PRODUCT DEVELOPMENT

AT RUBBERMAID, LITTLE THINGS MEAN A LOT

Even a litter-free kids' lunch pail is raking in the green

You could call it the environmentally correct lunch pail. Earlier this year, Rubbermaid Inc. rolled out a litter-free lunch box known as the Sidekick. It's a simple yet stylish insulated cooler that features three plastic containers for a sandwich, a drink, and one other item. That means no plastic wrapping, no cans, no milk cartons—and presumably no waste. Rubbermaid figured its offering would be a natural for parents worried about the nation's swelling garbage glut—especially those who have had the environmental riot act read to them by their school-age children.

Well, this "green" lunch box may not save the planet, but it sure is generating plenty of greenbacks for Rubbermaid. Despite its $10 or so price tag, which is several dollars more than the charge for most lunch boxes, the pail is now all the rage among the grade-school set. Rubbermaid hasn't been able to ship the things out fast enough, and it already has plans to expand the product line with new models. All told, Rubbermaid expects its share of the $35 million lunch-box market to double, to roughly 12%, by next year. "It's both functional and trend-right," says a spokesman for Target Stores.

True, designing a smash-hit lunch box may not seem like one of the great technological achievements of the modern age. Still, the Sidekick is emblematic of the little things Rubbermaid does so well. By dint of its marketing savvy and speedy product-development cycles, the company has won a sterling reputation for innovation. Consider that some 30% of the company's total sales have come from new products in recent years (table).

STELLAR GROWTH. Rubbermaid Chairman Walter W. Williams is determined to keep the new-product pipeline jampacked. Otherwise, warns Williams, "you get years of drought." These are bountiful times at Rubbermaid. The company's prodigious product output, including such hits as its plastic tool boxes and stylish bathroom accessories, have contributed to a stellar 18% average earnings-per-share growth since 1985.

The inspiration for the Sidekick came about a year ago, after one of Rubbermaid's big retail customers, Canadian Tire Corp., suggested that Rubbermaid place some of its plastic containers inside a lunch box and sell it as an alternative to throwaway plastic wrap and paper bags. "Kids are going home and saying: 'Look, Mom, we can't have juice boxes any more,'" says Ellen Johnson, leisure-products buyer for the Canadian hardware and auto-parts chain. Rubbermaid, which already had a product with some of these features in the works, quickly signed on.

NO WASTE
The 'green' box is all the rage among the grade-school set

By January, Rubbermaid's product-development team had prototypes ready and rushed to have the Sidekick set for production by late spring—in time for this year's back-to-school season. Kids who were shown the Sidekick warmed up to the cooler, and they especially liked its push-button-lid, which pivots around the entire cooler.

To ensure that the lunch pail keeps food well insulated, Rubbermaid engineers decided to base the design on its existing line of plastic coolers, which feature high-density polyethylene liners. They settled on a four-quart model which is larger than a standard lunch box but necessary to accommodate the plastic Servin' Savers containers for the food and drink items.

Rubbermaid designers also worked up splashy violet and blue-green color models, both of which sport lime-green trim. The color schemes appealed to both sexes and offered a different look than rival boxes featuring cartoon characters such as Teenage Mutant Ninja Turtles. They gave prominent play to the powerful Rubbermaid brand name by slapping a shiny red logo on the front of the pail.

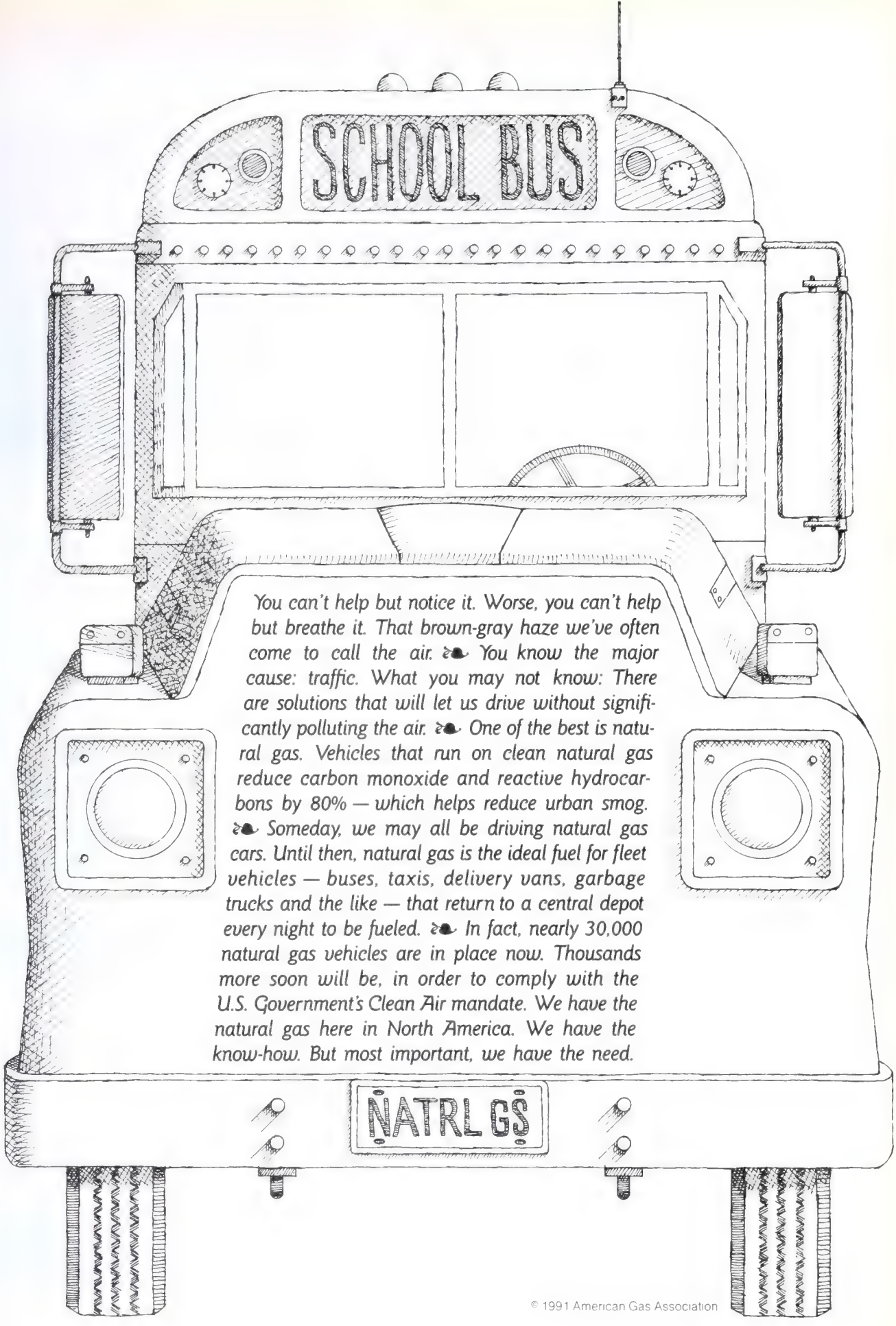
Then, too, there was the issue of pricing. At Rubbermaid, it's the responsibility of the product team—not the bean counters—to make sure the company hits its goal of a 12% to 14% return on the assets used to develop a new product. To hit that goal, the Sidekick needed a retail price of about $10—far higher than the $5 to $7 charged for most lunch boxes.

HIGHER MARGINS. Luckily for Rubbermaid, the added features of the Sidekick have apparently been enough to offset its premium price. There has been "no price resistance," says Scott E. Jennie, Rubbermaid's manager for insulated products, who led the team that developed the lunch box. Indeed, retailers like stocking the Rubbermaid lunch box because it affords higher margins than cheaper brands which are often used as loss leaders.

Based on the initial success of its Sidekick, Rubbermaid plans to roll out six other versions, featuring different colors and additional food containers. One of the models will be a much larger version, including a reusable ice pack to keep food chilled, that will be aimed largely at blue-collar types who carry their own lunches.

Just how environmentally sensitive Joe Lunchbucket is remains to be seen. For now though, it seems Rubbermaid's brand of "green marketing" is striking a chord with tree-hugging parents and their activist kids.

By Zachary Schiller in Wooster, Ohio



You can't help but notice it. Worse, you can't help but breathe it. That brown-gray haze we've often come to call the air. ❧ *You know the major cause: traffic. What you may not know: There are solutions that will let us drive without significantly polluting the air.* ❧ *One of the best is natural gas. Vehicles that run on clean natural gas reduce carbon monoxide and reactive hydrocarbons by 80% — which helps reduce urban smog.* ❧ *Someday, we may all be driving natural gas cars. Until then, natural gas is the ideal fuel for fleet vehicles — buses, taxis, delivery vans, garbage trucks and the like — that return to a central depot every night to be fueled.* ❧ *In fact, nearly 30,000 natural gas vehicles are in place now. Thousands more soon will be, in order to comply with the U.S. Government's Clean Air mandate. We have the natural gas here in North America. We have the know-how. But most important, we have the need.*

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BIG RAIL IS FINALLY ROUNDING THE BEND

After decades of decline, freight service is improving. But will alienated shippers return?

Not so long ago, when Procter & Gamble managers wanted to ship Tide or Pampers to retailers, railroads were not an option. Long-haul trucks could guarantee prompt, damage-free deliveries. Trains only guaranteed headaches. Shipments were hopelessly delayed, boxcars were dilapidated, and the typical railroader's attitude toward customers was simple: The train's coming by sometime tomorrow, whether you're there with your freight or not. Be there if you want to ride.

Not anymore. These days, the big railroads offer P&G a full menu of goodies. With reconditioned railcars, streamlined scheduling, and up-to-the-minute tracking of shipments, lines such as CSX, Burlington Northern, and Santa Fe have convinced the consumer-goods giant that they can come close to trucks on service at a better price. Result: Procter & Gamble Co. now spends about $125 million a year to ship by rail, and railroaders are fighting for more. "How much will it grow? We haven't put a limit on it," says Dennis M. Whan, P&G's associate director of corporate transportation.

Big Rail is coming back. After decades of losing business to trucks, barges, and other freight haulers, U. S. rail carriers have halted their long slide. They've cut inefficient capacity, closed down unprofitable lines, slashed the industry's bloated work force by half, and installed modern networking technology to move trains along on time. Slimmed down and wised up, they've also embraced the gospel of quality service. They're juggling railcars to suit shippers and offering on-time delivery good enough to mesh with just-in-time manufacturing processes. They're telling shippers not only when cargo will arrive but also where it is at any point in transit.

'LEARNING TO DANCE.' It all adds up to profits—a far cry from the desolate 1970s, when Penn Central Transportation Co. led eight big railroads into bankruptcy court. Rail productivity has more than doubled since 1980. And with revitalized lines such as Union Pacific Railroad Co. and Consolidated Rail Corp. showing earnings gains this year in the face of recession, Wall Street has stoked a fire under rail stocks, bidding them up almost 60% since January (charts). Add to that big strides this summer in labor talks mediated by a Presidential Emergency Board, and the rail outlook is brighter than it has been in years. Says Gerald Grinstein, chief executive of Burlington Northern Inc.: "This industry is learning to dance."

Mastering the new steps, however, will take a lot more practice. Most of the improvement in profitability so far has come from cost-cutting, not new revenues. While truck addicts ranging from Wal-Mart Stores Inc. to foreign carmakers may have rediscovered the rails, big commodity shippers such as steel mills are very much on the wane. The biggest carriers will fall far short of 1981's all-

ne high of nearly $31 billion in reves. Future profits will depend on how ccessful the rails are in scouring for w customers. "It's impossible to rink your way to profitability anyre," warns Union Pacific Executive e-President Fred B. Henderson.

To find new business, the railroads l have to shuck off the hidebound, rogant culture that has plagued them years. They'll also have to overcome persistent reputation for shabbiness—image perpetuated lately by several adline-grabbing derailments. Top railad executives may proclaim they've en the light, but some customers note at old habits die hard. The industry is ll plagued by railroaders who "don't e a damn about what the customer nts. They just want to run their choos," says James B. Mitchell, transtation director for Boise Cascade rp. To really spark revenues, says rail nsultant and Harvard business school ofessor Carl S. Sloane, railroads must cognize that the customer is king.

NG LOW. The railroads are listening. few years ago, John W. VanDyke, nsportation director at Reynolds Met- Co., wrote a letter to the president of ch major railroad threatening to aban- the rails entirely if they didn't imve service. VanDyke got some attenn: UP, Norfolk Southern Corp., and ers banded together to coordinate pments among themselves and de- ed ways to load rolls of paper-thin da-can aluminum so they wouldn't get atched. "It took the rails a while to derstand," VanDyke says, "but they sponded."

Customized service is becoming the rm for prized shippers. Since last Dember, for instance, Burlington North- n has run a special train from Boise scade's mills in International Falls, nn., to St. Paul, carrying paper that en is relayed to other BN points. To lure that business away from truckers, BN acquired new flatcars, slung low to the ground to smooth out the ride. It set up computer links with the company, so each side now knows what is moving and when it's going. As a result, on-time performance has hit 95%.

The real test of rail responsiveness, however, will be whether the industry can woo customers it has traditionally alienated. One success: European luxury carmakers. Until recently, the likes of BMW and Jaguar Ltd. stuck to the highways, fearful of the dents, scratches, and even bullet holes that Japanese carmakers had complained of when their cars were delivered. Then the railroads started handling autos more carefully, using closed-door freight cars. By the late 1980s, BMWs were rolling on Conrail track, and the carrier recently won business from Volkswagen of America. Before, says BMW traffic manager Kenneth R. Swain, Conrail "ruined cars."

Railroads have streamlined schedules, reconditioned cars, reduced damages, and improved on-time delivery

Because the nation's rail network is divided into regions, with each region dominated by one or two carriers, cooperation among railroads has become an imperative for quality service. Union Pacific, acknowledged as the leader in computerized tracking and scheduling, routinely grants other carriers access to its computers so that they can seamlessly tie into UP's network when shipments are passed from one line to the other. Likewise, railroads often form teams to solve problems such as the one posed by Reynolds. "We steal shamelessly from each other," says Conrail CEO James A. Hagen.

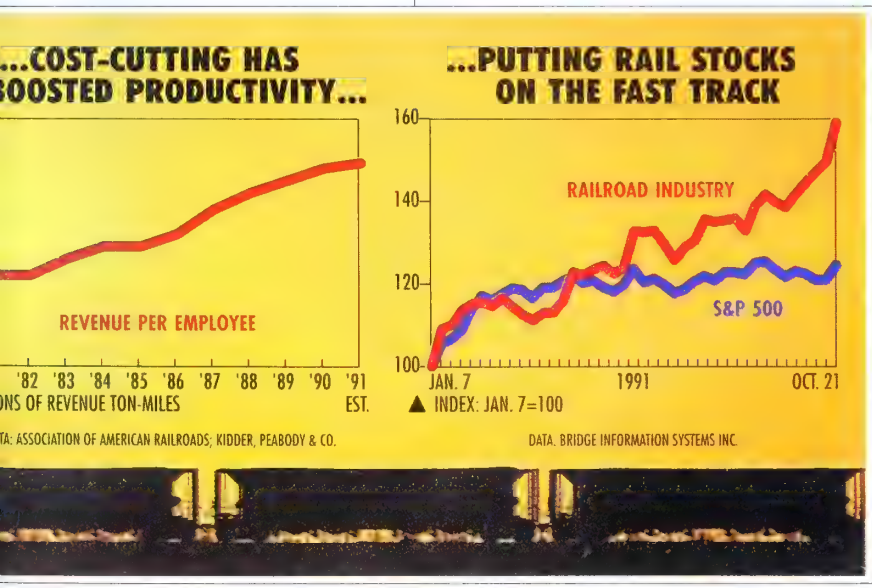
Despite a pitched battle with long-haul truckers—the rail lobby helped defeat a measure in Congress this summer supporting three-trailer trucks—the railroads are even teaming with these rivals on short hauls. In what is known as "intermodal" service, shipments are packed in containers that can be whisked off flatcars and driven to their local destinations by trucks. One model of the new teamwork is a 20-month-old deal between J. B. Hunt Transport Services Inc. and the Atchison, Topeka & Santa Fe Railway Co., where computer links help the carriers move freight together. The agreement this year will account for $80 million of Hunt's expected revenue of nearly $700 million, and the trucker has already made a similar pact with Burlington Northern.

The big question mark is labor. Quality service means motivated workers, and the railroads have never been known for either. For decades, the rails have been stymied by inefficient union work rules designed to preserve jobs. Separate crews for yard and road work, for instance, meant that a road crew couldn't stop en route to pick up freight. Similarly, a worker from one craft couldn't handle another's work, meaning a windshield installer would have to wait for another specialist to remove a wiper.

MODEL CENTER. Fortunately for investors, after a one-day rail strike last spring, a Presidential Emergency Board began weeding out many such inefficiencies. But everything has its price. Workers are steaming as the railroads continue to trim employees. "Morale is really bad now," says Michael Young, who chairs the Brotherhood of Locomotive Engineers for Union Pacific's eastern district in Wyoming. "People are saying: 'Why should I do anything extra when the railroad I've worked for for 20 years is treating me this way?' "

Inside Union Pacific's Harriman Dispatching Center in Omaha, however, labor troubles, bureaucratic sluggishness, and other emblems of the old order seem far away. In a tornado-proof bunker, two panels of video screens the length of football fields track all of UP's trains in vivid colors, noting where the trains are, what's on them, and what maintenance teams are nearby. Clearly, UP and the rest of the industry have a tough haul ahead to attract new business. But Harriman should serve as a reminder: The railroads are finally headed out of a long, dark tunnel.

By Joseph Weber in Philadelphia



THE NEW YORK TIMES, TUESDAY, JUNE 25, 1991

PERSONAL COMPUTERS

Tandon's Modular Upgradeability

By PETER H. LEWIS

Stuart Goldenberg

THE Tandon Corporation has become the newest and most enthusiastic proponent of a new trend in personal computers, broadly known as modular upgradeability.

That simply means one can take the microprocessor and related components out of an older computer and replace them with a faster or more powerful set of chips, in effect getting the latest technology for less money than it would cost to buy a complete new system of comparable power.

For computer users who are interested in moving to new generations of software, including the performance-hungry Windows and OS/2 operating systems, upgrades are a very attractive alternative to buying a new machine.

Several other computer makers, including AST Research Inc. and the International Business Machines Corporation, already offer PC models that can be upgraded at the microprocessor level by replacing the main internal circuit board. The new Tandon SL-III models, which are on display at the PC Expo computer trade show opening today in New York, are unusual in that the components can be replaced without opening the computer case.

The process, Tandon officials said, is similar to inserting a video cassette into a VCR deck. It takes about a minute and requires no tools. Hard disk drives, too, can be plugged in without opening the box. The board-level upgrades offered by other computer companies typically require the user to open the case and perform minor surgery, but even so the process can be completed in less than 10 minutes.

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Modular upgrades "simplify the task of coping with very short life cycles of microprocessors," said Bruce Stephen, director of hardware research for the International Data Corporation of Framingham, Mass. "We're in a time when processor technology turns over every nine months or so, so it makes sense to buy a safeguard against obsolescence."

Jim Seymour, a Texas-based computer consultant who advises many large corporations, said, "I don't see any reason not to buy one" of the upgradeable systems. He said upgradeable systems were a trend, not a gimmick.

Mr. Seymour noted that most computer companies do not charge a premium for upgradeable systems or replacement boards, so the user should not face a financial penalty. In addition, the upgradeable computers have many advantages, he said. They simplify design, manufacturing and inventory problems for the computer company. They allow dealers to keep fewer parts in stock. They reduce the need to train workers when new technologies emerge and make it easier to repair and maintain the systems.

Adding advanced components without opening the case insures flexibility.

Also, because an upgrade cartridge or board can be designed, tested and certified much more quickly than a complete PC system can, new chips can be put into the hands of customers much faster.

Mr. Seymour cited the ability of I.B.M., through a board-level upgrade to the 386-based PS/2 Model 70, to offer its customers the first Intel Corporation i486-based chips on the market last year.

In fact, I.B.M. is so proficient at speeding upgrades to market that earlier this month it announced an Intel i486 50-megahertz upgrade for its PS/2 Models 90 and 95, even though Intel itself did not officially announce the existence of the chip until yesterday.

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Only the most power-hungry users really need instant access to the newest technologies. Most upgrade customers, including the ones Tandon is seeking, are likely to be interested mainly in saving money and preventing headaches.

Tandon, of Moorpark, Calif., is best known in this country as a maker of floppy disk drives. It supplied the ones in the original I.B.M. PC 10 years ago. It began offering full computer systems last year.

"Tandon's SL-III eliminates the need to buy another computer ever again," Graham Beachum, the head of Tandon's North American operations, said, upgrading the level of hyperbole in the industry.

Tandon's new SL-III "standard unit" systems have 2 megabytes of working memory, expandable to 32 megabytes; a single diskette drive, seven expansion slots and room for four extra disk drives, a keyboard mouse and monochrome monitor and Microsoft DOS and Windows.

The standard unit has a list price of $895, but that does not include the processor or hard disk, a situation similar to buying a car without an engine or a gas tank. The user can then choose a processor cartridge and storage system based on the level of power that is needed.

A 286 processor operating at 16 megahertz costs $795. A 20-megahertz 386SX processor costs $1,165 or $1,395 depending on whether it has a high-speed data cache system. An i486SX chip running at 20 megahertz is $1,795, and a full-powered i486 at 33 megaherta is $2,495.

Tandon offers five different hard disk modules, including an 80-megabyte disk for $345, a 110-megabyte module for $535, and a 200-megabyte module for $725. A "super VGA" color monitor is $325.

Piecing it all together, one could buy an i486SX-based system with 110 megabytes of storage and a super VGA color monitor for a list price of $3,550. According to Tandon's plan, a couple of years from now you could pop out the old cartridge, pop in a new one containing Intel's 100-megahertz version of the i586 chip (or something like that), and be on your way.

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KEEP UP WITH THE TIMES.

Now before you even begin to read this, make sure ou read the article on the left. After all, that's what this d is really about. We'll wait.

Are you done? No cheating now.

O.K. Now what can you say when The New York imes writes an article like that about you? Well, we're sure we can think of a few things. First of all, we'd like to tell you the name. It's called the Option from Tandon. The world's first fully modular upgradable personal computer.

Which means it's the world's asiest computer to upgrade. Which means you don't ave to throw out your old computer just because you vant the latest technology. But if you really did read the rticle, you already knew that. We were just testing.

Then we'd like to tell you about our 30 day money ack, no questions asked policy. So if for any reason you eel that our new Option isn't everything The Times romised it to be, you can return it. No problem.

Oh and how can we forget to tell you about our 24 our information and technical assistance hotline. With n actual live person standing by, 24 hours a day, 7 days a week, 365 days a year, just in case you have a question, need some assistance, or heaven forbid, have a problem.

And while the Times article did say that we supplied the first floppy disk drives for the original IBM® PC, we'd like to add some of our other firsts, like our invention of the first removable hard drive, or the more than 16 patents that belong to our top architects.

Now that you know all that wonderful stuff about us, you may need to know one more thing. Our phone number. It's 1-800-800-8850. Just give us a call if you need any more information.

There now. That should keep you up to date. Except for maybe one more thing.

We also make a very good notebook computer. And maybe they'll write about that one day soon. Thank you. We think that says it all.

OPTION
Tandon

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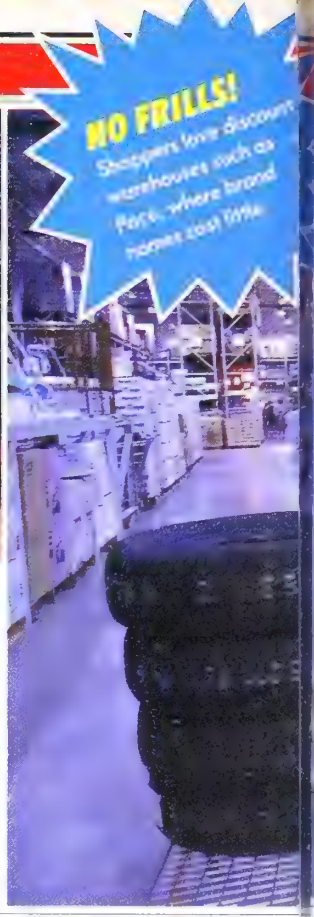
ABUNDANZA! New York Metropolitan Community College's pasta "wine in with flavorful helpings of seasonal $20 a head.



NO FRILLS! Shoppers love discount warehouses such as Pace, where brand names cost little.

VALUE MARKETING

QUALITY, SERVICE, AND FAIR PRICING ARE THE KEYS TO SELLING IN THE '90s

Back in the 1980s, Leah Gorman, a 41-year-old San Francisco housewife, did her level best to further the cause of conspicuous consumption. "Five years ago, if I saw an outfit for one of my boys that would look darling, I bought it. I'd never give it a second thought," says Gorman, who also owns a small business making gift baskets. "If I was a little tired, we'd just go out for dinner. It wasn't an issue."

Now, Gorman is a consumer transformed. Her husband, a former executive in a leasing business, is starting up a company, and watching the dollars is the rule. Darling outfits are out. Most groceries now come from deep-discount shoppers' warehouses. "I pay a quarter of what I used to," says Gorman.

A continent away, Sherrie Edelman Natko, 27, is tightening her belt, too. She and her lawyer husband bought a house in Philadelphia—but they can't unload their old apartment in Brooklyn, N. Y. She's cooking at home more, and coupons come in handy. Expensive shopping is out. "You don't need to have the latest this or that," says Natko. "All of a sudden, you realize you have to think about the future. It's scary."

BONFIRE EMBERS. Scary, too, for the marketers who are trying to sell to all the Natkos and Gormans. More and more, they see their customers sobering up, pulling back, hunting for value. Value is what Leah Gorman calls "not overpaying for quality." And as the 1980s bonfire of the vanities recedes to a dim distant glow, value is becoming the marketer's watchword for the 1990s. It's what customers are demanding—the right combination of product quality, fair price, and good service.

Value means all that, but it's also important for what it doesn't mean. It doesn't mean high quality if it's only available at even higher prices. It doesn't necessarily mean cheap, if cheap means bare-bones or low-grade. It doesn't mean high prestige, if the prestige is viewed as snobbish or self-indulgent. Instead, says Martyn Straw, an adman at Geer, DuBois Inc., agency for Jaguar Ltd., "value is the new prestige."

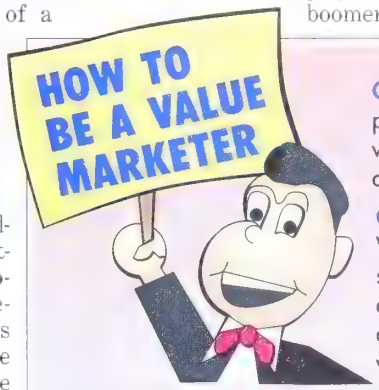
Above all, value isn't about position-g and image-mongering but about real erformance and delivering on promises. nd that means value won't be an easy ell, unlike the attention-getting "aspira-onal" marketing that pushed status in he 1980s. Value can fetch a rich price: It an be a $42,000 Infiniti Q45 from Nis-an. And it can come at a discount: A hopping trip to Wal-Mart. "I'd be ard-pressed to think of a ient who hasn't lked about commu-cating value," says eith L. Reinhard, hairman of ad agency DB Needham World-ide Inc.

LD REWARDS. The val-e zeitgeist is part at-ospherics, part eco-omics, and part de-ographics. Consumers re repudiating the retched excess of the 80s and searching for he more traditional re-ards of home and amily. And they're huddering at the spec-r of a recession that eems to be coming ack for a second visita-on, if it ever really de-arted in the first place. ut the growing focus n value also stems from profound changes in the American consumer marketplace.

Take spending power. Real income growth for families got a boost when women entered the work force. But now, with many women already working and many baby-boomer couples assuming new family burdens, the growth in disposable income is scarily slow (charts, page 134). And aging baby boomers, whose debt burden is already high, realize they have to worry about college tuitions and retirement. "It's finally sunk in on the boomers that this generation won't necessarily be living better than their parents did," says Jane R. Fitzgibbon, a trend-watcher at Ogilvy & Mather Worldwide Inc.

At the same time, other trend-watchers at Grey Advertising Inc. and research firm Yankelovich Clancy Shulman note that this generation of consumers is both savvier and more cynical than were its predecessors. For decades, marketers preyed on the insecurities and even ignorance of America's newly rising middle class. It told them that only a premium-priced national brand promised quality. It taught them that the right car and the right mouthwash, bought at the right store, spelled status.

Today, consumers know that many products are at or near parity. And they no longer believe their place in so-



Offer products that perform This is just the price of entry. Consumers have lost patience with shoddy goods, and fashion won't distract them from flimsiness

Give more than the consumer expects Whether it's providing environmentally sound packaging or including air-conditioning in a car's standard price, offering pleasant—and useful—surprises will win customer loyalty

Give guarantees Offering an enhanced warranty, and ponying up full refunds when problems arise, can help justify that higher price

Avoid unrealistic pricing Compaq found that out: It hewed too long to premium pricing that its basic product could not justify

Give the customer the facts Use your advertising to provide the kind of detailed information today's sophisticated consumer demands

Build relationships Frequent-buyer plans, 800 numbers, and membership clubs can help bind the consumer to your product or service

DATA GREY ADVERTISING, BW

ILLUSTRATION BY LAUREL DAVIS BW

ciety can be demonstrated by their dish detergent. And since they can buy brands on the cheap at a warehouse club such as Pace Membership Warehouse, or even get brand-name apparel at a discount-outlet mall, boasting about where they shop doesn't make much sense.

Instead consumers want products that perform, sold by advertising that informs. Listen to Bernard Arnault, chief executive of France's LVMH, marketer of such luxury goods as Louis Vuitton bags, Moët & Chandon champagne, Christian Dior couture, and Givenchy perfumes: "The period when consumers would pay any price for any product that claimed to be a luxury is over. Consumers today want quality. They are really measuring intrinsic value and not simply buying to impress others."

BUZZWORD. In the hyperventilating world of marketing, watchwords fast become buzzwords, of course—and value is no different. Many marketers are simply trumpeting value in ads or slapping the word on packages. And in many cases, value is just a euphemism for a price cut. "'Cheap' is a no-no, and 'value' is a substitute for 'deal,'" says Jack Trout, president of Connecticut-based marketing consultants Trout & Ries.

Emphasizing the price component of value has its points as a sales tool, especially in these uncertain economic times. Taco Bell's shrewdly fashioned "value menu" of Mexican fast food, with many items priced below $1, has been enormously successful. Lower-priced cigarettes from R. J. Reynolds Tobacco Co. and Philip Morris Cos. have been steadily capturing market share, going from 18% of the market last year to 24% this year, according to John Maxwell of Wheat, First Securities Inc.

But at its best, value marketing means much more than slashing prices or handing out coupons. It means giving more: an improved product, with added features and enhanced service—all at a better price. And it means changing the role of marketing itself. Rather than being a means to shape image, marketing becomes part of the system for delivering value to the consumer. How? With enhanced guarantees or longer warranties. With information-packed advertising that educates rather than hypes. With efforts to build customer loyalty, such as 800 numbers, membership clubs, and frequent-buyer plans. And with packaging improvements that aren't intended merely to catch the shopper's eye but to make the product easier to use or more environmentally friendly.

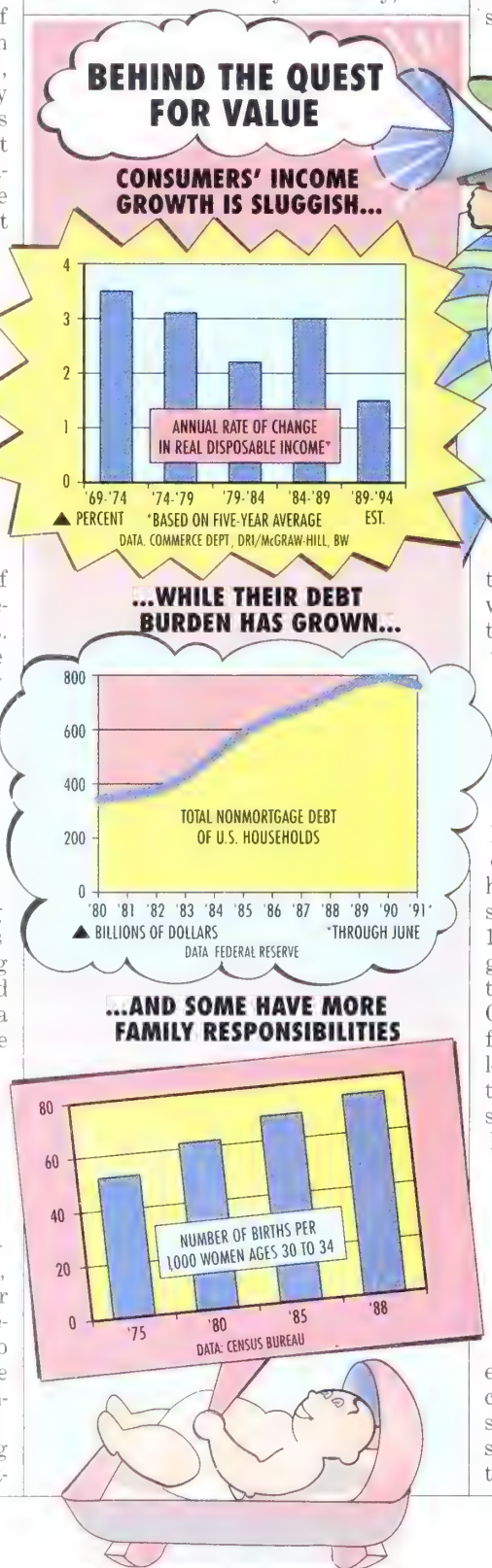
In the short term, value marketing can add up to a double bind for marketers: It often spells added production and marketing costs at lower unit prices. So, value marketing will be most successfully practiced by the leanest, toughest competitors with the greatest cost advantages. That's a big reason why Wal-Mart Stores Inc. has overtaken inefficient Sears, Roebuck & Co. as the nation's largest retailer. With its low costs and extraordinary efficiency, Wal-Mart can turn a profit selling bran names for less than the competition.

Similarly, value marketing is wha Japanese auto makers have long done i the U. S. First, they brought value t economy cars, with such models as th Honda Civic and the Toyota Corolla Now, they're raising the value stakes i the luxury category. At around $42,00 Toyota's top-of-the-line Lexus and Ni san's Infiniti cars offer the sort of opu lence, features, and servic that some European in ports, with their highe cost structures, charg $50,000 to $60,000 fo

HARD SELL. In the lon run, value may well o fer a way to revers the erosion in bran identities that er abled marketers t charge premiu prices in the firs place. After years o offering price discount and coupons, "marketer have educated consumers t expect low prices that unde mine brand loyalty," says Edwar T. Fogarty, president of Colgat U. S. For companies that figure ou the equation, value marketing could be way to make a brand name mean som thing again. Paradoxically, that mean value marketing could be a way out o the discounting trap. If a brand ha value, it may be worth its premiu price.

That's clearly the idea behin BMW's strategy in response to th threat from Acura and Lexus. In th late 1980s, the German carmaker's ac emphasized yuppie gratification. But has taken a different tack for the red signed 3-series of sports sedans. "I 1989, we would probably say: 'This car got 189 ponies under the hood, so gra that stick and have a good time,'" say Carl W. Flesher Jr., marketing direct for BMW of North America Inc. Nov lengthy print-ad copy carefully explain the engineering, safety, and service re sons for buying a BMW. The openin line: "Even people of means are askin ... What makes this car worth th money?"

More and more consumers are as ing that question. The research firm Yankelovich Clancy Shulman has bee conducting a continuing survey 2,500 Americans since 1971. One set questions asks which items or exper ences respondents associate with su cess and accomplishment. In 1988, 27 said wearing designer clothing was success symbol: This year, only 17 think so. Staying at a luxury hotel fe



m 30% to 19%. Says nkelovich's Barbara plan: "The consumer now unwilling to nk of prestige as a rogate for value." A e in point is the nge of heart felt by e Flior, a systems lyst in Potomac, Md. ur years ago, she ught an expensive ach handbag. She v vows she'll never it again. "It's only a ," she says. "I feel lty because it costs much."

ALITY TIME. Kellogg learned a painful son in value after shing through big ce increases on its ce-ls in the late 1980s. e rapid growth in s expensive store-nd cereals convinced nsumers Kellogg ouldn't command h a premium and s one reason its mar- share slid from 42% 1986 to 37%. Now, re couponing and ad-tising for core nds give Kellogg about 39% of the rket. Brand-name marketers who de-r a clear value from the start can id such an ordeal. Häagen-Dazs Co., veyor of superrich ice cream, struck chord with consumers last year ough a simple ploy: It made its prod- available in economy-size quarts, ich now account for 25% of sales.

Even in slow-growing or recession-gued markets, a better value can gen-te new business. In the restaurant de of New York, expense-account-fu-l temples of gastronomic excess have n buffeted by the new frugality. ny high-end restaurants are launch-cheaper "bistro" menus. And many ers are closing their doors. But Car-ne's, a two-year-old restaurant on nhattan's Upper West Side, has been king 'em in. It serves stupendous tions of Italian food, family-style. The average check per guest: $20. Says managing partner Scott Spizer: "People come here and say, 'Chow down!' "

To make money doing that sort of thing, of course, you have to keep an eagle eye on costs. Sara Lee Corp., for one, knows how to deliver value while collecting healthy profits. The company sells its L'Eggs women's hosiery at some of the most competitive prices in the market. Because of heavy spending on the most efficient manufacturing technology, it has managed to maintain margins with almost no price increases over the past 10 years. The combination of low price and a strong brand has given L'Eggs a 54% share of its market.

Some U. S. carmakers are also learning to deliver more features for less money—while driving home the value message in ads. "Each of our car lines has a value story," says Thomas C. McAlear, Chrysler Corp.'s director of marketing operations. In Chrysler's "family-value package" for minivans, for example, the company scored a big success by offering basic models with air-conditioning and automatic transmission thrown in at a total price of $14,000.

PREMIUM PASTE. But value doesn't always mean offering more for less. In fact, the right feature or product attribute can enable a marketer to charge a premium even in this frugal era. In three years, Church & Dwight Co. has garnered an astonishing 8% of the toothpaste market with products containing its signature Arm & Hammer baking soda, which some dentists say is good for gums. "We use the added performance to command a price premium of 25% or so," says Arm & Hammer President William Egan III. Rivals are being roused to action: Colgate-Palmolive Co. and Unilever U. S. Inc. may introduce similiar products.

Added features won't command higher prices if consumers don't see any benefit, though. That's what Campbell Soup Co. learned recently when it started selling soups in disposable microwave containers. They cost a hefty 99¢ for 7.5 ounces—but consumers will pay for the value of convenience, right? Not this time. They opted for regular Campbell soup in cans, a much better value at 69¢ for 7.5 ounces. "You can just throw the soup into your own mug and then microwave it," admits Herbert Baum, president of Campbell Soup U. S. "The consumers voted at the cash register."

One added feature consumers clearly do like is enhanced warranties, and they're a growing element in many mar-

VALUE MARKETERS: A SAMPLER

Certain companies are leading the way in focusing on greater value. Among them:

TACO BELL

▶ By reducing operating costs enough to make money on menu items of under $1, it has reintroduced fast-food rivals to the notion of value

WAL-MART STORES

▶ 'The low price on the brands you trust.' The motto says it all. Wal-Mart is now the world's largest retailer

SOUTHWEST AIRLINES

▶ By combining consistently low fares with friendly but bare-bones service, it's the most successful carrier of its size

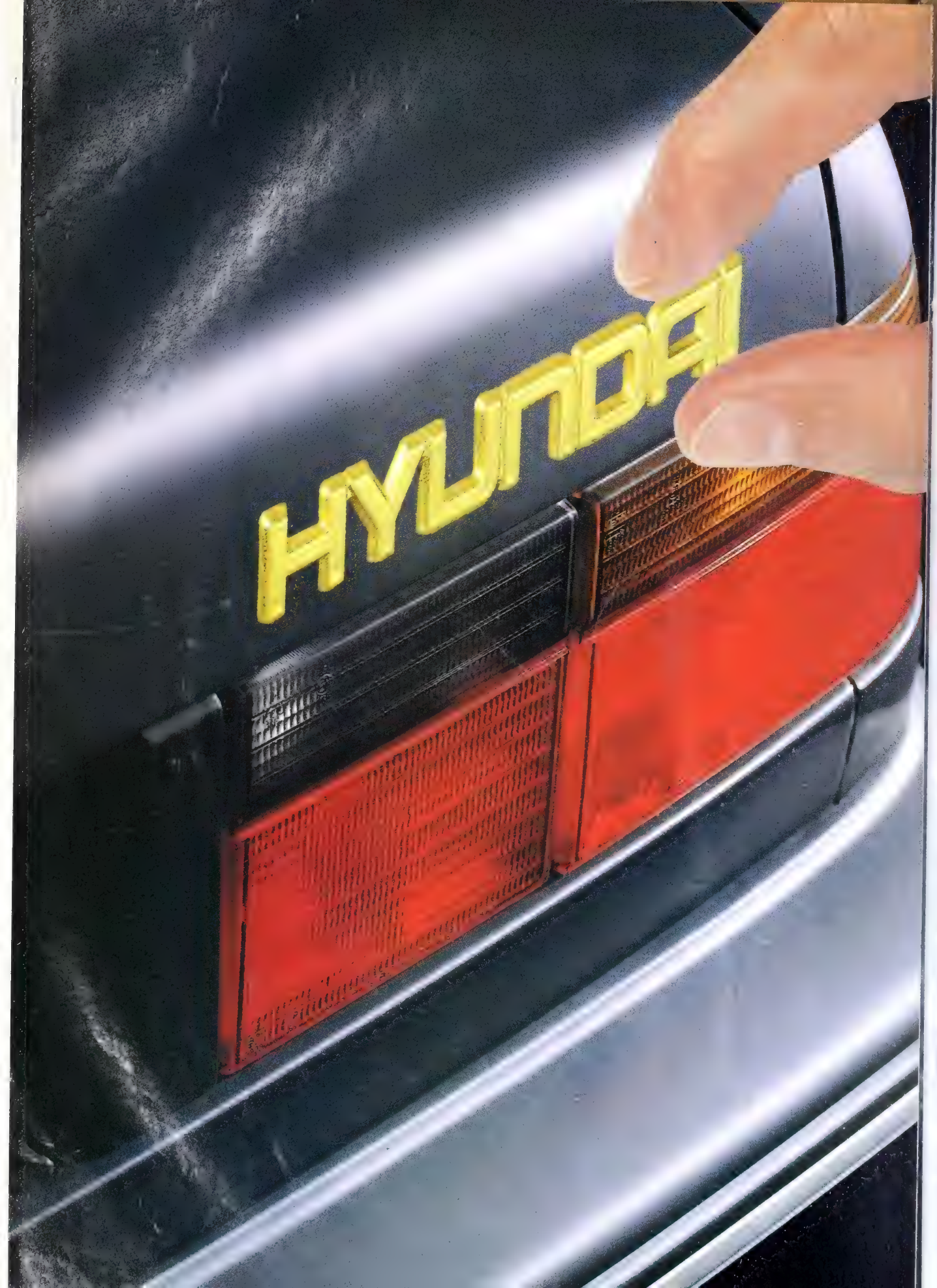
SARA LEE

▶ Its personal-products subsidiary prices its L'Eggs women's hosiery to beat store brands and still retain a quality image

TOYOTA

▶ From the $7,000 Tercel to the $42,000 Lexus, the Japanese carmaker consistently offers more features at reasonable price than most competitors

DATA: COMPANY REPORTS, BW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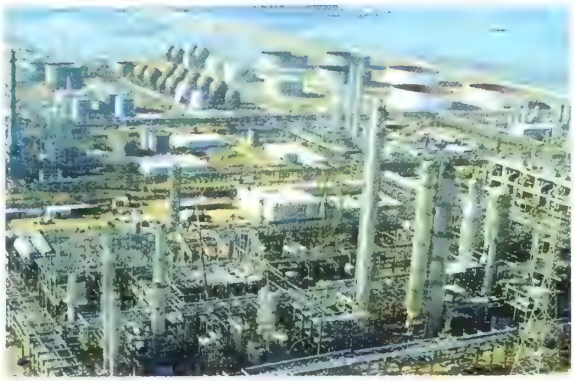

Originating 44 years ago as a small contractor, Hyundai has rapidly expanded to become one of the international giants in engineering and construction with over US$20 billion of overseas contracts, the builder and operator of a shipyard with the largest ship tonnage in the world, and the largest producer of automobiles in Korea.

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keters' efforts to improve their image for value. "Manufacturers are fighting to differentiate themselves, and they are using warranties to do it," says James Reider, a senior consultant on consumer products at Arthur D. Little Inc. This fall, for example, Chrysler is offering a choice between a seven-year, 70,000-mile power train warranty or a three-year, 36,000-mile warranty on all parts. Michelin North America got the message, too. In mid-September, it introduced a new tire warranted to last 80,000 miles. That's some 20,000 miles more than the best warranties offered by other tire-makers in the U. S.

Toyota Motor Corp. demonstrated how handling of a warranty problem can turn a potential marketing disaster into a strong value message. Soon after the U. S. launch of its luxury Lexus, th company had to order a recall. It did it style: The weekend before the recal dealers phoned every Lexus owner, pe sonally making arrangements to pick u their cars and offering replacement veh cles. "In hindsight, it was a watershe event," says George E. Borst, strateg planning chief for Toyota USA.

Ironically, the recall enabled Lexu

CARD WARS: MY VALUE IS BIGGER THAN YOUR VALUE

Keith Kendrick, marketing chief of MasterCard International, saw the 1980s whimper to an end in focus groups he staged around the country in 1989 and 1990. In one session for Gold MasterCard holders, an ad showing a yuppie buying herself a diamond was soundly rejected. The same ad had been applauded 18 months before. "Blake and Krystle Carrington were out," says Kendrick.

So MasterCard changed. The card's motto from 1985 to 1989 was "Master the possibilities," a theme laden with the promise of self-indulgence. Ads for the 1990s, by contrast, are utilitarian, prominently detailing such practical MasterCard features as cash-machine access. The company also is running a holiday promotion offering cardholders 10% to 25% discounts when they shop at such possibility-laden stores as Kmart and Dress Barn. The promotion's name? MasterValues, of course.

As MasterCard's shift shows, the long-running plastic war is increasingly being fought on the battleground of value. It's a brutal fight: Analyst James Hanbury of Wertheim Schroder figures charge volume in the U. S. will grow only about 7% annually in the 1990s, down from a 10% rate earlier.

NO FRILLS. Crowding the field are such entrants as Sears Roebuck & Co.'s Discover card, which has demonstrated the appeal of a no-frills value message. Launched in 1986, Discover captured $19 billion in charge volume by 1990. Customers pay no fee and can get a 1% rebate on charges they make on the card. True, that can be a minuscule reward, and, at almost 20%, interest rates are hardly low. But marketing chief William Hodges argues that the give-back sends the right message to cardholders who are too practical to turn up their noses at even small sums.

One issuer that's feeling the value squeeze is American Express Co. In the 1980s, the company used the tagline "Membership has its privileges" to triple its cards outstanding and push charge volume worldwide to $111 billion. Charge volume is flat so far this year, however. And AmEx' Travel Related Services division took a $265 million charge to cover, among other things, write-offs for its Optima credit card.

Rivals sneer that AmEx, that 1980s avatar of conspicuous consumption, is about as poorly positioned as plastic can be in the value-conscious 1990s. "They represent something antithetical to what's going on today," says Discover's Hodges, citing AmEx' prestige pitch and the fees of $55 and up. And rival Visa International has been pushing the idea that Visa is accepted in more places than American Express.

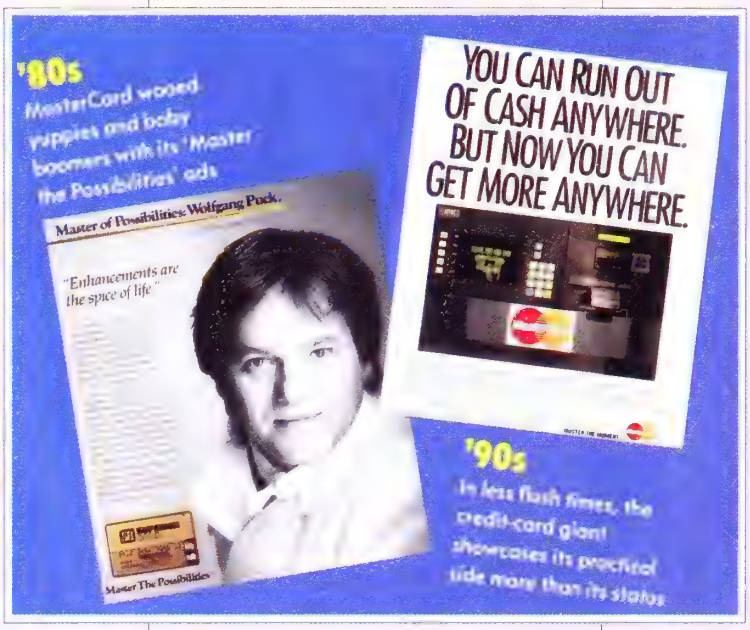
Some consumers are listening. Traveling in Europe a few years ago, James O. Richards, a Denver-based life insurance consultant, discovered that some places took Visa but not his American Express Gold Card. So Richards cancelled his Gold Card—with no regrets. "I've got two Visas, and there's no annual fee," says Richards. "Why would I pay $75 or $100 for a card?"

PLASTIC PERKS. American Express doesn't like such talk, but it's hardly about to abandon its high-end pitch. "There's nothing wrong with making Pontiacs," says Lewis Taffer, Gold Card's marketing director. "We prefer to build Rolls Royces." So AmEx is trying to enhance the value of its cards by rolling out new services and perks. Members can enroll in a savings plan or pay extra to hear about special low-cost deals on airline tickets.

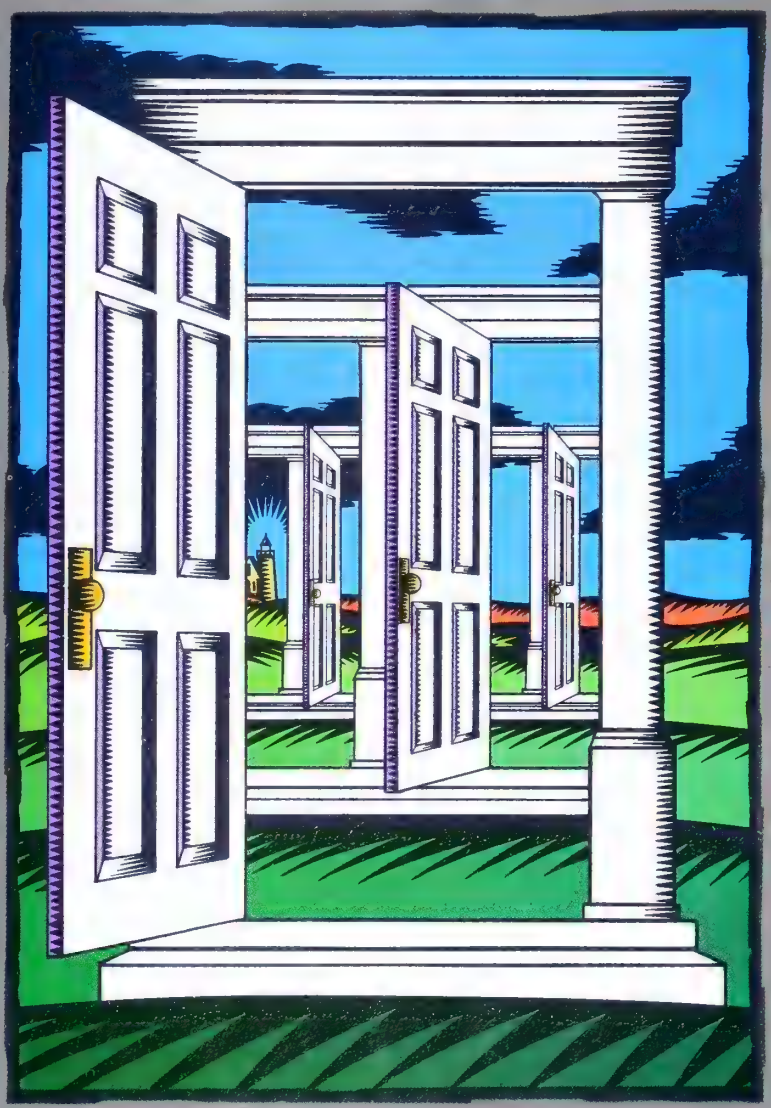
Since this summer, Gold Card members can order travelers' checks free by phone. They can also participate in Gold Card Events—a program that gets show and game tickets well in advance. Taffer cites a strong response to Membership Miles, which cardholders can join to earn frequent-flier points or to get points good for such perks as a tennis lesson with Ivan Lendl.

Yet Visa and MasterCard often match AmEx' efforts in such areas as extended warranties on items charged on the cards. Says Visa USA marketing chief Bradford Morgan: "The only thing that worries me is if AmEx' image plummets so much that we won't be able to play off them." AmEx is betting that adding more value will help it avoid that plunge.

By Christopher Power in New York



Who offers your employees more choices in retirement plans?



SEARS CATCHES THE VALUE BUG

KID STUFF
Its Sears' focus group-honored home value insurance. The insider learned in KidVantage program in July

If value means delivering high quality at a low price, Sears, Roebuck & Co. in recent years has seemed to have the formula down pat—only backwards. Plagued by high operating costs that drove prices up and saddled with a reputation for sometimes disappointing goods, Sears lost its No. 1 spot in retailing to Wal-Mart Stores Inc. So, it's something of a surprise to hear praise for a Sears marketing initiative, KidVantage. "This is the brightest idea they have had in years," says Kurt Barnard, editor of the newsletter *Retail Management Report.*

Launched this summer, KidVantage is Sears' attempt to come up with a value message. In focus groups, parents said they wanted Sears to offer better pricing, more frequent sales, name-brand kids' clothes, and some way to protect against the inevitable wear and tear of children's clothing.

MORE SALES. So, honoring the first commandment of marketing—Listen To Thy Customer—Gary Ramsey, merchandise manager for children's clothing, cooked up KidVantage. The program features more than 70 brand names, including Oshkosh B'Gosh. It offers shoppers a frequent-purchase card to help them track spending and earn discounts. And Sears' "WearOut Warranty," offers free replacement of kid's duds if they wear out while the child is still the same size.

Sears has stumbled in children's clothing before: A venture with McDonald's Corp. to expand into kiddie boutiques was killed. Meanwhile, Kids 'R' Us, a creation of Toys 'R' Us Inc., has an estimated $690 million in sales. The GapKids division of The Gap Inc. generates about $235 million in sales. Throw in the children's sections of Wal-Mart, Kmart, and others, and kiddie clothing has become a donnybrook of mass merchants.

Ramsey won't disclose numbers for KidVantage, but he is pushing the program hard. Sears has mailed details to its 28 million credit-card holders. Will it pay off? Could be. Carolyn Bauer, a mother in Evergreen, Colo., recently spent $60 at Sears on snow clothes for her two children. She found the warranty appealing. "I saved the tags because the snow clothes will get battered," she says. "There's a good chance they'll wear them out."

The value bug could spread throughout Sears. Already, it is launching a club for Craftsman tool owners that includes discounts and how-to tips. It's value marketing, all right, and could be just the medicine for what ails Sears.

By Christopher Power in New York

dealers to establish relationships wit their customers—and forming such rel tionships can be another vital element value marketing. Consumers want t know they're dealing with a responsiv accountable entity. "You hear th phrase 'relationship marketing' a l these days," says Barbara S. Feigin, d rector of strategic services at Grey A vertising. "But the marketers who reall embrace consumers will win."

That can be as simple as producin fact-packed ads. Or it can mean settin up an 800 number that gives customer a way of communicating with the con pany—and the company a way to lear what customers want. Burger Kin Corp., for example, introduced an 80 number two years ago. When the chai tested recycled bags in 50 stores, pos tive calls came in so fast that the compa ny went nationwide with the bags in si weeks instead of pursuing the muc longer rollout it had planned.

HEARTBREAKER. But relationships ca sometimes break hearts. At Randall' Food Markets Inc. in Houston, execu tives tried to build ties to shoppers wit a frequent-buyer program that offered monthly rebate. "People would get check for $1.20," says President R. Ran dall Onstead Jr. "They could save tha much on three coupons. It was a tota flop." Now, Randall's focuses its ener gies on improving service in its stores.

The worst fate of all awaits marketer who promise value at the right price— and then don't deliver. Says marketin consultant Marc C. Particelli of Booz Allen & Hamilton Inc.: "Unless a bran has substance to support its promises its equity begins to deteriorate." A dra matic case in point is Compaq Compute Corp., which steadfastly maintained a much as a 35% price premium over othe personal-computer makers. For years its technological superiority justifie that price, but the increasing quality o IBM-compatible clones eroded Compaq' claim to premium value.

In contrast, Apple Computer Inc. suc cessfully readjusted its prices: The new Macintosh Classic II, at $1,899, is pricie than IBM clones but half the cost of th old Mac and loaded with features. Say Apple USA President Robert Puette "Value is what Apple is all about."

Value, of course is what every mar keter should be all about. The marketer who figure out how to add value wil thrive even in these tough times. Th ones who treat value as the jargon o the age may end up wishing they ha never heard of value marketing.

By Christopher Power in New York, wit Walecia Konrad in Atlanta, Alice Z. Cune in San Francisco, James B. Treece i Detroit, and bureau reports

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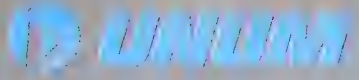

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BRUNNER HAS TRIPLED THE NUMBER OF DESIGNERS AT APPLE

COMPUTERS

HE'S GA-GA ABOUT HIS BABY —AND HE'S NOT ALONE

Bob Brunner's well-received laptop sells Apple on in-house design

Bob Brunner can't keep his mind off it. It's granite-gray, weighs 5.1 pounds, and Brunner brings it to bed night after night. His wife is fed up, he says.

Yet Brunner is no ordinary consumer swept away with product lust. The tall, blond, 33-year-old Californian is manager of industrial design at Apple Computer Inc., and the "it" is his baby, Apple's new PowerBook notebook computer. While Apple worked with Sony Corp. to engineer and manufacture the machine, Brunner's hot design team out of Cupertino, Calif., shaped what users see and touch, from the novel trackball in the middle of the keyboard to its playful hotdog-shaped screen hinge.

Industrial designers invariably go ga-ga over their own products. But just a week after PowerBook was introduced, it appears that customers can't keep their hands off Brunner's baby, either. "We're totally crazy about it," says a salesman at ComputerWare Inc. in Sunnyvale, Calif. People are lining up to play with the store's one demonstrator.

While Brunner looks like a guy who would be happier with a surfboard under his arm than with sketches and foam models, he is no laid-back Californian. Until two years ago, he was an ambitious member of Silicon Valley's hip, young design fraternity. He was on the fast track, collectin awards and a list of cl ents at Lunar Design, respected consultancy.

In 1989, however Brunner gave up his in dependence and wen corporate by joining Ap ple. Brunner really se tongues wagging in Sil con Valley's gossipy de sign community by an nouncing that he wa going to end Apple' longtime dependence o outside consultants an build a powerful in house group to desig the company's newes products.

Brunner's strategy risky. It certainly a lows for faster, mor strategic use of desig But much of Apple's past success ha been bound up with outside designers– ever since Steve P. Jobs hired the me curial Hartmut Esslinger of frogdesig Inc. Esslinger left when Jobs did in 198 and Apple turned to a slew of consu tants. But without the autocratic Es linger, Apple lost a strident desig champion and began losing its edge. Ap ple turned out some design bombs, in cluding the 18-pound "portable" Mac.

Since his arrival, Brunner has triple his staff. His team has access to ever conceivable state-of-the-art tool, fro huge stereo lithography machines tha make models to a Cray computer tha conducts mold-flow analyses of plasti casings. Most important, Brunner ha the ear of the boss. Chief Executiv John Sculley, who meets with Brunne weekly, says good design is critical fo the company "to recapture the idea tha Apple is on the edge of innovation."

NO HANDLE. The PowerBook series o notebooks, starting at $2,299, is the la est and splashiest example. Brunner initial efforts included last year's wel received Macintosh LC, but the Powe Book, announced on Oct. 21, is a majo design statement. Apple researc showed that it's not just flying exec who use portables these days. As weigh and size have fallen, lots of ordinar business folk have taken to toting the notebook computers from meeting t meeting throughout the day and hom at night and on weekends.

The hardware translation: No handl for example, because Brunner believe

POWERBOOK'S CENTERED TRACKBALL CAN BE USED BY RIGHTIES AND SOUTHPAWS ALIKE

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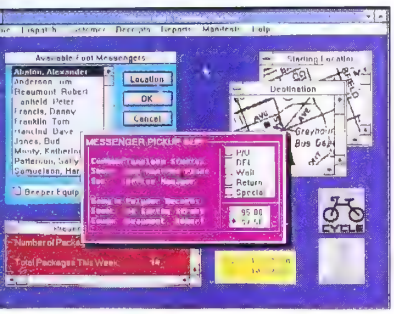

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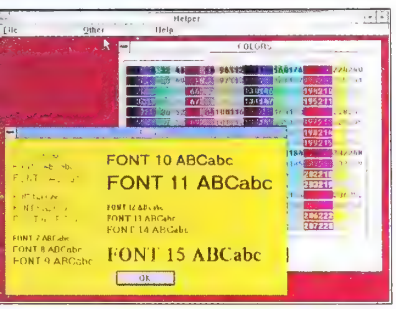

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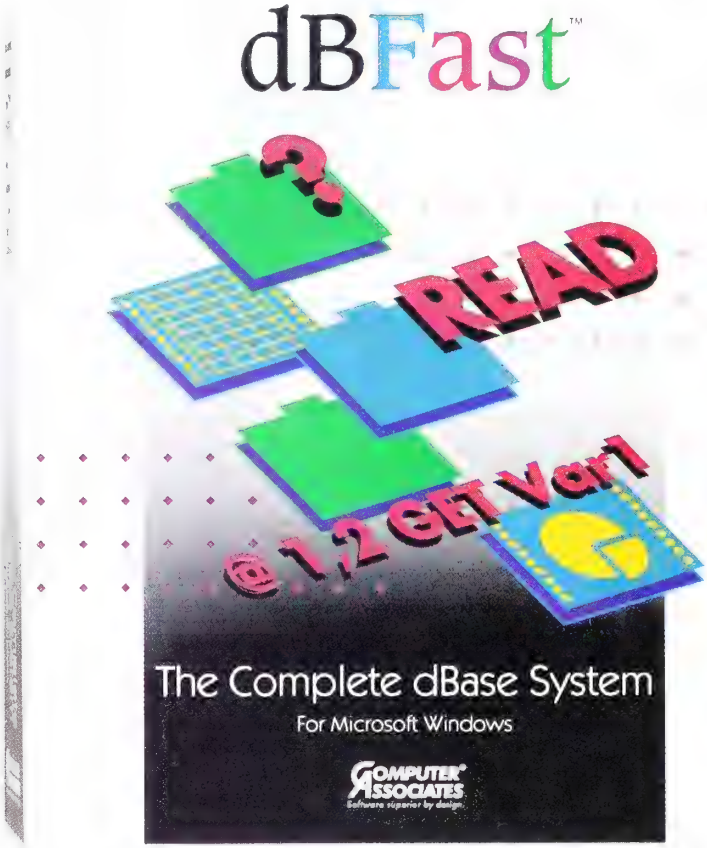

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users will carry a PowerBook like a Filofax. The clasp on the PowerBook opens quickly and easily with one hand. The flat surface in front of the keyboard, on which to rest the heels of your hands, makes it easier to type on your lap. Flip-down feet adjust the angle of the keyboard for writing on a conference-room table or your own desk. Add to that Macintosh's easy-to-understand software features, boasts Brunner, and the PowerBook becomes "one of the most usable portables on the market."

The eye-popper, in terms of pure design novelty, is clearly the trackball. By putting it directly on the keyboard, Brunner did away with the awkward clip-on trackballs and tethered mice used in other laptops. Planted in the center of the machine, it can be used by righties and southpaws without any adjustments. The tooling and engineering required to make that happen were not trivial, but that means it is not easily or cheaply copied, either.

WRIST COMPUTER? The choice of color for the case was not merely a designer's aesthetic preference. Studies show that consumers associate darker colors with richness and value. Black might seem the obvious choice. Apple went with dark gray, partly because a black computer would not meet European contrast and reflectivity standards, blocking some purchases from overseas.

Manufacturing issues play a big role in Brunner's designs. Apple uses snap-in plastic subassemblies to make many of its desktop machines easier for robots to assemble. But that adds more plastic material. To save weight and size in the PowerBook, Brunner turned to "a brand-new discovery"—old-fashioned screws. The trade-off: PowerBooks require more hand assembly for the tiny screws.

Brunner is also creating "concept computers" analogous to Detroit's concept cars. A favorite: the Time Band, a computer that might sit on the wrist and manage your schedule via radio links to other computers that track your appointments and plane and train schedules. It could be sold as a "wristMac."

Sculley says he remains committed to having a top-flight design team within Apple, and PowerBook certainly helps justify that stance. But the company has been under cost pressure as profits have plunged. Brunner's department has been spared, but he has clearly become more stressed. Although he tries to get home in time to spend early evenings with his wife and two young daughters, Apple designers say they receive electronic mail from him in the wee hours of the night. That's when his bedside PowerBook comes in handy.

By Joan O'C. Hamilton in Cupertino, Calif.

People

TURNAROUND ARTISTS

PALMIERI: EVEN NOW, THE CRAZY EDDIE FIASCO "REALLY HURTS"

VICTOR PALMIERI STEPS UP TO THE PLATE AGAIN

This time, he's out to turn around America's largest failed insurer

To members of the Turnaround Management Assn., Victor H. Palmieri is practically a deity. So when the renowned corporate workout specialist strode up to the podium at the TMA's annual meeting in early October, he knew he was among friends. He had intended to start his speech with a few of his favorite one-liners, such as: "There was a time when people thought being a turnaround expert meant you were a cross-dresser." Or "retired politicians turning around financial institutions is like Mike Tyson hiring on as counselor for battered wives." But Palmieri decided to depart from the script for his opening line, and it cracked the audience up. "Good morning, class," he ad-libbed. "We're going to start out with a tough one. It's called Crazy Eddie."

Palmieri can joke about Crazy Eddie now, but the laughter hides a painful chapter in his career. After making his name with bailouts at Penn Central Corp. and Baldwin-United Inc., Palmieri and a group of investors bought control of Crazy Eddie Inc. in 1987, with plans to fix it up. Instead, the New York electronics retailer went bust. His reputation damaged, Palmieri seemed to drop from sight. "It really hurts, because I've been tagged with it," he says. "It hurts my pride."

Now, the 61-year-old Palmieri has a shot at burying the ghost of Crazy Eddie. He has been put in charge of rehabilitating Mutual Benefit Life Insurance Co., seized by New Jersey regulators last summer. The victim of real estate investments gone bad, Mutual Benefit, in Newark, N.J., is the largest American insurer to fail. Since August, Palmieri and a dozen advisers have been scrambling to come up with a rehabilitation plan for Mutual Benefit. The plan may include some asset sales. Already, he has sold off the company's group-insurance business for around $500 million. But Palmieri is keeping his options open until he has a formal rehab plan ready in November.

Until then, he is driving himself and his team hard, putting in long hours and working most weekends. It's a mode he's comfortable with, particularly after several years out of the spotlight. "This is precedent-setting, with major implications," says Peter Martosella, Palmieri's right-hand man. "Victor likes that."

When he came on board as CEO, Palmieri found a company in chaos. In the

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weeks before state regulators took over, Mutual Benefit's bond rating had tumbled, sending frightened policyholders on a mad dash for their cash. Employees were demoralized and afraid.

Palmieri immediately called a series of employee meetings in the company cafeteria. He told them things were going to get worse before they got better—but they would eventually get better. "Some people expected sympathy," says Executive Vice-President Kathleen Koerber. "But I think his was the right approach. Employees had been listening to a lot of sugarcoating lately." Since then, Palmieri has concentrated on meeting with others who hold the key to his success or failure: Mutual Benefit's creditors, contract holders, and policyholders, whose accounts have been frozen.

Unlike other workout specialists who try to restrict the flow of information to gain more control, Palmieri stresses an atmosphere of openness and cooperation. So far, he seems to be succeeding. "You can pick up the phone and call him without being put through 10 channels," says Shawn Kelly, lawyer for a group of Mutual Benefit contract holders. "We think that's important."

KID GLOVES. Palmieri operates with an air of confidence. Even his opponents in negotiations tend to treat him with kid gloves. Once, during the Baldwin-United deal, his back medicine kicked in during a crucial meeting with creditors, and he dozed for half an hour. When he woke up, he spoke for 10 minutes about the subject they had just finished discussing—and no one dared interrupt him. Sober and blunt, he typically shows little emotion. Colleagues say he often greets both good and bad news with the same straight face and a measured "Mm-hmm." Meetings with him, says lobbyist Loretta Glucksman, "can be daunting, but sort of tantalizing."

For all his confidence, Palmieri bristles easily. Mention that some people think his pay—around $900,000 a year—seems high. "Those are rounding errors on the kind of money you can make on Wall Street," he retorts. Mention that some people think his work at Baldwin-United was less than a total success, since it emerged from bankruptcy a shadow of its former self. Those critics "have absolutely no understanding of the fact that Baldwin was probably the most complicated, the most complex financial structure that anybody has ever had to reorganize," he says. "I view [the reorganization] as a miracle."

There was nothing complicated about Palmieri's climb to the top of his profession: He got on the fast track early and stayed there. The son of an Italian engineer who emigrated to the U. S. in the 1920s, Palmieri grew up in Southern California and got bachelor's and law degrees from Stanford University. He practiced law in Los Angeles in the 1950s and then went to work for a client, real estate developer Janss Investment Corp. In the late 1960s, he co-founded an educational-services company—since sold to Encylopaedia Britannica Educational Corp.—and Palmieri Co., his consulting firm. Twice he has stepped away from business to work in Washington. In 1967, he was director of the National Advisory Commission on Civil Disorders, and in 1979, he was an Ambassador-at-Large in charge of refugee affairs.

Nowadays, Palmieri lives in Manhattan's artsy SoHo district with his third wife, executive recruiter Cathryn Connors Palmieri. They met in a Rockefeller Center elevator and were married last year. While Palmieri's role at Mutual Benefit has limited their once-frequent tennis games, he still finds time to indulge his other main hobby: cooking. Their apartment is designed around a huge, airy kitchen, and sprawling dinner parties are routine. "My risotto is clearly at a different level than even the best New York restaurants," he boasts.

As a turnaround doctor, Palmieri hit the big time in the early 1970s, when he was hired to spin off Penn Central's vast nonrail assets. He disposed of thousands of properties, including New York's Waldorf-Astoria hotel and the Yale Club, with a total worth of more than $1 billion. His next high-profile job came in 1983, when he took over faltering Baldwin-United. The nancial-services and insurance compan once a simple piano maker in Cincinna had become a debt-soaked mess. Und bankruptcy protection, Palmieri sold o most of its assets, and it emerged fro Chapter 11 in 1986.

EMPTY WAREHOUSES. It was around th time that Palmieri took his most fatef misstep. He and Oppenheimer & Co. crea ed a $100 million fund to invest in trouble companies. After looking at scores of ca didates, they settled on Crazy Eddie. had a great presence in New York, but i management was locked in a bitter figh and its stock was low, Palmieri explain Yet a week after winning control, the Pa mieri group alleges, an examination Crazy Eddie's $125 million inventory r vealed that only half of it was really ther Peter Martosella broke the news to h boss. "My God," was all Palmieri cou say.

Other than bad feelings, not much r mains of Crazy Eddie today. The compar went bankrupt not long after Palmie took over, and it was eventually liquida ed. Palmieri has brought a lawsuit again the chain's founding family and their auc tors, Peat Marwick Main & Co. The ca should come to trial next year. In an u usual move, Palmieri returned the unspe portion of his Oppenheimer fund to inve tors. "I just said: 'Screw it,' " he recalls. was so disgusted."

Since then, Palmieri has been lying fai ly low. He failed to turn around a solar-e ergy company called Chronar Corp., but was mercifully small and didn't genera much bad publicity. Now, he is nearly fi ished resuscitating Colorado-Ute Electr Assn., a big utility that overexpanded ar was choking on debt. Still, the specter failure infuriates him. "I have to keep te ing myself that if you go to the plate co sistently, you're going to get criticize when you strike out," he says. "The time you got on base or scored a run are goin to be yesterday's news." With any luc the crisis at Mutual Benefit will turn in the home run he's been looking for.

By Peter Finch in Newark, N.

THE PALMIERI FILE

1970 A lawyer and former real esate developer, Palmieri is hired to run a nonrail unit of troubled Penn Central

1973 Penn Central appoints him to dispose of its huge real estate holdings, which takes five years and eventually raises $1 billion

1983 He's hired to rescue Baldwin-United. Three years later, the financial services company emerges from Chapter 11 with $1 billion in assets, one-ninth its former size

1987 With investors he buys Crazy Eddie, a New York-based electronics chain. They discover alleged inventory fraud, the company goes bankrupt, and investors lose $14 million

1991 Palmieri ge another shot at the big time as head of teetering Mutual Benefit Life Insurance

DATA: BW

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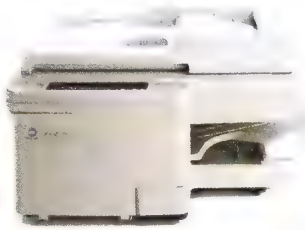

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BUDDY, CAN YOU BORROW A DIME?

Just when banks need the profitable retail-lending business most, consumers have turned thrifty

Commercial banks by the thousands these days are reeling from billions of dollars worth of bad real estate and corporate loans. Yet for most of them, there has been a heartening bright spot: retail customers. Excluding mortgages, consumer lending, which jumped 30% between 1985 and 1989, to $400 billion, has been a cash cow that has offset the bleak profusion of write-downs and write-offs.

No longer. With unemployment up and the economic recovery sputtering, consumers are feeling badly strapped. Personal bankruptcies are on the rise. Loan delinquencies remain stubbornly high. And demand for new credit is slowing. Retail banking, says analyst Charles Peabody of Kidder, Peabody & Co., "will still be profitable. But you won't see the big returns of past years."

Even more troubling to bankers is the likelihood that consumers may not return to their free-spending ways for years, if ever. After the debt binge of the Roaring Eighties, households are busily cleaning up their balance sheets and paring their debt payments. Many economists believe that formerly conspicuous consumers are increasingly favoring savings and investment. "People are turning away from debt," says economist Allen Sinai of the Boston Co. "We might not see the same volume of purchasing for quite a while."

SCRAMBLING. This newfound consumer thrift couldn't have come at a worse time for banks. The extent to which banks' retail divisions are no longer easing the pain of ailing real estate portfolios and scarce corporate borrowers is illustrated most graphically by Citibank, which on Oct. 15 reported a staggering third-quarter loss of $885 million, stemming from asset write-downs and severance costs. Equally alarming, though, was the slowdown in Citi's retail business. Profits at Citi's once-enviable consumer bank, the largest in the nation, tumbled to $56 million in the third quarter, from $286 million a year ago. Citicorp Chairman John S. Reed says that his bank's consumer earnings may plunge as much as 25% this year. In 1990, Citi earned a record $979 million from global consumer operations.

It's easy to see why bankers scrambled to get into the consumer business in the 1980s. The eight-year economic expansion that began in 1983 fueled a

precedented era of uninhibited spend- As baby boomers entered the work ce, the appetite for big-ticket items red. Banks jumped to meet the swell- demand for credit. Branch networks ead, automatic teller machines multi- d, and consumer lending from credit ds to home-equity loans skyrocketed. at's more, the federal government in- ectly encouraged the spending. Until Tax Reform Act of 1986, interest on sumer loans was fully deductible. Bankers especially relished the con- ner business. Compared with corpo- e borrowers, households are far bet- credit risks. Retail loans are small spread widely over the population. y're also more profitable. Although prime lending rate has fallen to 8%, sumer rates remain steep: Big banks charge 19.8% on credit-card loans.

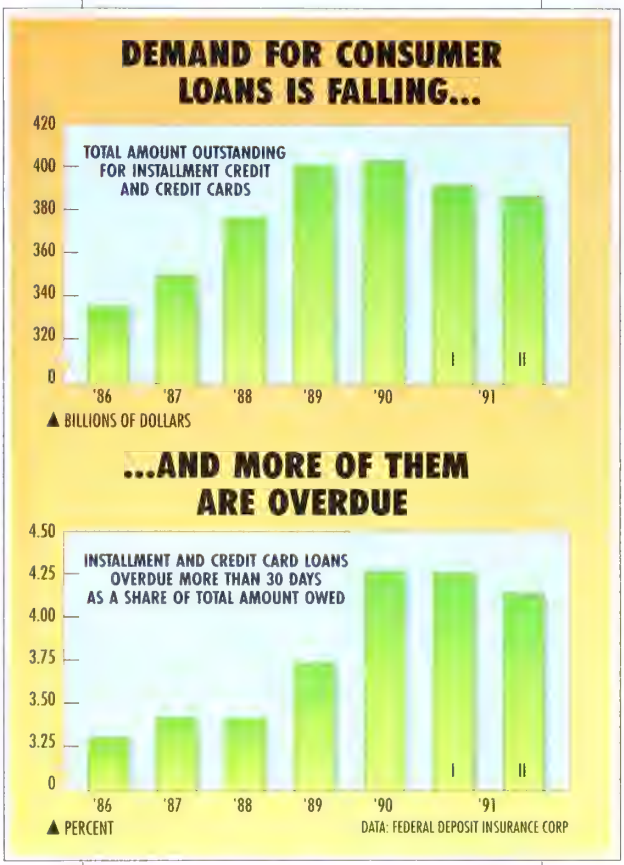
RY CONSUMERS. The retail- king boom began fading last r as the weakening economy sed consumers to start reduc- their heavy debt load. The mp in real estate prices also ant fewer applications for ne mortgages. The downturn elerated after Iraq invaded wait and war loomed. As con- ners' confidence ebbed, they an cutting back on new pur- ses. Then, after months of rning from forecasters, the nomy finally slipped into re- sion. Unemployment rose, sumer-loan growth stalled, delinquencies crept up.

Consumers remain leery. On . 29, the Conference Board re- ted that consumer confidence k to recession-era levels in ober, despite signs of an eco- nic recovery. Unemployment ains a big scare, especially ong white-collar workers, who ditionally have accounted for biggest share of consumer rowing. And household bud- s are stretched. Personal- kruptcy filings jumped 23% in 12 months ended in June, the gest leap since 1986. So, loan nquencies remain high (chart).

ust as distressing to bankers is the tening demand for fresh loans. Banks e had to become much stricter in eding out poor credit risks. Yet at the ne time, they've had a hard time get- g business from creditworthy borrow- who have been shying away from rything from auto loans to home rtgages. Once rapidly growing credit- d loans actually fell to $130 billion at end of June, from $133 billion at the of 1990, according to the Federal posit Insurance Corp. Analyst James Hanbury of Wertheim Schroder & Co. imates that charge volume in the U.S. will grow only 7% a year in the 1990s, vs. 10% in the 1980s.

Applications for home-equity loans, still popular and tax-deductible, are slowing. At the end of June, there were $66 billion worth of home-equity lines of credit outstanding, up 20% from the previous June, according to the FDIC. But many bankers say demand has subsided greatly in recent months as consumers refinance existing home mortgages at lower rates. At Wells Fargo & Co., one of the biggest home-equity lenders in the nation, the volume of new loans is down 10% from year-ago levels, says James G. Jones, head of consumer credit for the San Francisco-based bank.

What's more, some experts fret that delinquency rates on home-equity lines of credit, less than 1% at the end of June, might move up smartly next year.



Economist Paul Getman of Regional Financial Associates, a Westchester (Pa.) consulting firm, calls the rate "suspiciously low." He believes that households are drawing down their lines just to meet other obligations.

Despite setbacks on the retail front, consumer loans will never be as troublesome to banks as commercial real estate. A survey by the FDIC of 100 mostly retail banks, including many established solely to issue credit cards, showed an average return on equity of roughly 29% last year. A similar study reported that the ROE had fallen to 22% in the first half of 1991, but the profitability remained far above the 9% return that the banking industry as a whole generated.

But those hefty margins will be increasingly squeezed in the years ahead. Ameritech will soon join American Telephone & Telegraph, Ford Motor, and other nonbank competitors in going after banks' lucrative credit-card business. Kidder analyst Peabody believes banks will have to boost promotional spending and even reduce fees to protect their market share. Fees now account for a third of pretax earnings from cards. Citicorp has already tested a no-fee Choice Visa. The bank insists this isn't a prelude to a broad elimination of card fees.

Lofty card rates may also start to edge lower. Since December, the Federal Reserve has cut the discount rate four times, but credit-card rates haven't budged. Banks argue that they need the high rates as compensation for steep back-office costs and high risks. But consumer advocates are becoming increasingly impatient with that line of reasoning. If the economy remains listless much longer, analysts speculate that Congress may try to pressure rates lower, especially with elections looming in 1992.

TODDLER PLANNING. All this means slimmer earnings at a time when bankers can ill afford them. As banks' other lines of business have crumbled, their retail operations have become ever more critical to the bottom line. At Chase Manhattan Corp., for example, consumer banking accounted for more than 90% of the bank's first-half profits of $249 million, says Peabody.

No doubt consumers will reopen their wallets once the economy improves. But many experts say consumers won't return to the borrowing habits of the 1980s. Baby boomers, with babies of their own, are looking ahead to college tuition and retirement costs. "What bankers have to face up to is that savings and investment, not spending and borrowing, will drive households more in the future," says banking consultant William J. Bowen of First Manhattan Consulting Group.

That may come as a big disappointment to many bankers. State and federal restrictions limit the menu of retail products, such as insurance, that banks can offer. And even if regulations are eased, banks will face tough competition from brokerages and mutual-fund managers. Either way, the days when consumer loans were banks' biggest cash cows may be gone forever.

By John Meehan in New York, with bureau reports

PAUL GRANGE BW

BUFFETT AND HIS RIGHT-HAND MAN, DERYCK MAUGHAN

BROKERAGES

BEHIND THE HAPPY TALK AT SALOMON

Surprisingly good earnings, but a future filled with litigation

In years ahead, if Salomon Inc. escapes draconian punishment for its role in the Treasury auction scandals, the turning point in its fortunes can be easily pinpointed: Oct. 29, 1991. On that day, the beleaguered firm took a look into the future, and pronounced it good—or at least not as terrible as many had anticipated.

Chairman Warren E. Buffett made the announcement personally, in two-page newspaper ads. Solly is estimating its anticipated future penalties and legal fees at $200 million, far less than many lawyers and analysts had predicted. With earnings lifted by bonus-chopping and a resurgent bond market, Salomon's profits were up 7.6% in the third quarter, instead of dipping as expected. Investors rejoiced, bidding up the company's stock in a frenzy of buy orders. Indeed, word of Solly's earnings bonanza traveled so fast that the stock began to move before the announcement was made (page 152).

The investor excitement was understandable but premature. Salomon's earnings gain hinges on two tenuous elements. One is the $200 million charge, which is pure guesswork and may well be just a fraction of what the firm may have to pay out in fines, civil court judgments, and legal fees. A more sober estimate would have sent Salomon's earnings deep into the red. Also crucial to the earnings gain is a $110 million cut in pay, most of which is doled out in year-end bonuses. That's a big saving but could come back to dog Salomon if the firm's best producers leave.

> A $200 million reserve for penalties is just a guess. And bonus cuts will save cash —but key players may bolt

The paycheck imbroglio and stiff daunting legal fiasco are but two of the managerial nightmares that will continue to haunt Buffett in the years to come. Yep, years. Even though he still calls himself "interim chairman," and also wears the mantle of chairman and chief executive officer at Berkshire Hathaway Inc., the Sage of Omaha clearly has settled in for the long haul—and not just to protect Berkshire's $700 million investment in Solly's preferred stock. He speaks admiringly of the British tradition of nonexecutive but often strong-willed corporate chairpeople—and he seems ready to play just that role at Salomon. He is going well beyond his efforts to clean up Salomon's tarnished government-bond operations and beef up compliance procedures.

STIFF LOSSES. Buffett is enacting far-reaching changes that may fundamentally alter the way Salomon does business. A shakeup is in the works, one that will result in some firings but no wholesale layoffs. "We will be refocusing our business with an eye on profitability," says Buffett's right-hand man, Chief Operating Officer Deryck Maughan. Among the units whose profitability has been called into question are investment banking and the U. S. equity-trading operation, which suffered stiff losses as Solly liquidated stock positions in recent months. Maughan notes that the U. S. equity-trading operation's profitability over the years has been "mixed."

In addition to shifting its energies, Solly is tightening up its overall capital deployment procedures and reducing its use of leverage—unsurprising from Buffett, who is no fan of debt. And then there is the compensation cut. That $110 million saving, about 8% of payroll cost last year, has simultaneously boosted third-quarter earnings while appealing to the public's dislike of high Wall Street salaries.

By these steps, Buffett is putting the torch to the more freewheeling aspects of Solly's corporate culture. It is a prospect that clearly does not dismay him. "I've read *Liar's Poker*," Buffett told the Council of Institutional Investors on Oct. 24, "and my job is to prevent *Liar's Poker II* from being written."

Even though Buffett's attempt to reshape Salomon is tailor-made for the risk-averse, debt-fearing Nineties, it may not fly with some of his own people. In cutting compensation, Buffett could wind up losing employees that he would rather keep—and at a time when the firm's government-bond operation is u-

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der unrelenting pressure. In the latest blow to Salomon's government-bond operations, the Treasury Dept. announced that it is allowing all brokerages, and not just primary dealers such as Salomon, to participate in Treasury auctions on their customers' behalf. That cannot help but weaken Salomon's government-bond franchise. Moreover, other Wall Street firms are hiring and would probably be glad to snap up refugees from Buffett's rule.

With Salomon's operations under scrutiny, Buffett is also raising the barricades—because there is a newfound edge of prickly defensiveness to the firm's statements on the bidding irregularities. Yes, Salomon will pay all "valid" legal claims, "but we will be no one's patsy," Buffett said in the earnings announcement. And the firm appeared to back off from Buffett's previous practice of full disclosure to the public. On Oct. 24, Salomon announced that improper bidding in eight auctions had yielded Salomon only about $20 million in profits. That's far less than the losses previously estimated by attorneys for aggrieved investors and seemed to lay the groundwork for the similarly low-ball $200 million charge. Salomon officials would not make public a report to federal regulators detailing how the trading profits were calculated.

The retreat from the tell-all stance was a carefully calculated response to legal reality. Every nugget of information released by Salomon can be used by plaintiffs in a host of civil suits. And those suits could be more than just a nuisance to Salomon if the firm is found to be liable for all of the losses sustained by investors—in particular the short-sellers who claim to have been hurt by Salomon's overbidding at Treasury auctions.

'SHORT SQUEEZE.' Salomon, indeed, is making it clear that it won't just lie down and die before civil litigants. True, the firm has long admitted to Treasury bidding irregularities. But Salomon executives—though still contrite—downplay the impact and extent of the firm's actions. Short-sellers have claimed they were victims of a "short squeeze" in which, possibly because of collaboration between Salomon and other large investors, they were forced to pay high prices to replace borrowed bonds that they had sold in expectation of a price decline.

Salomon officials concede that some short-sellers may have been hurt by higher prices but won't go so far as to admit that the firm was manipulating the market. At least, not intentionally. "It is possible to have an unintentional squeeze," a senior official points out, and Maughan says that Salomon has not uncovered "any evidence to suggest there was collusion" between Salomon and other investors to squeeze short-sellers. Salomon officials are even more emphatic on another issue. They firmly deny Street speculation that the firm's options and futures traders profited from the company's overbidding.

If evidence of shenanigans does turn up—and civil discovery proceedings are just getting under way—Salomon could be in serious trouble. Short-seller losses have been estimated to run upwards of $100 million—far more than the auction-related profits claimed by Salomon. But lawyers for Salomon's opponents feel that Salomon should be penalized for their clients' losses, no matter what the firm's gains. The federal investigations are likely to be over in a year or two, a high Salomon official notes. But civil litigation will probably drag on for ages. Quite a mandate for Salomon's "interim" chairman."

By Gary Weiss in New York

SOLLY'S STOCK PRICE: A QUESTION OF TIMING

Wall Street roared with approval on Oct. 29, when Salomon Inc. reported better-than-expected third-quarter earnings. The stock rocketed to 28⅜, up 2¼, on volume of 3 million shares—the fourth-most-active stock on the Big Board.

But the cheering started a day before, when Solly stock ran up 1⅜, to 26⅛, on 1.14 million shares—nearly three times the average of the previous five days and the heaviest trading of the past month. Securities analysts, who often spur preannouncement buying by raising earnings estimates, were not behind the surge. Quite the contrary: Analysts had been slashing estimates, says Benjamin Zacks of Zacks Investment Services, Inc. True, the stock market had rallied on the 28th, but that could hardly account for Solly's gain. All of which leads to a troubling question: Did some people know of the earnings report and trade in advance of it?

KEEPING MUM. The New York Stock Exchange is not saying whether the Solly trading triggered an alarm. But a Big Board spokesman says: "The exchange always reviews all unusual trading activity." An investigator at the New York office of the Securities & Exchange Commission also declined to comment.

What adds to the specter of a leak is that Solly ran the earnings report and an accompanying 2,500-word letter from Chairman Warren E. Buffett to shareholders in the Oct. 29 editions of *The New York Times*, *The Wall Street Journal*, and *The Washington Post*. To appear in the papers the morning of the earnings announcement, the two-page ad had to be prepared in advance—raising the possibility its contents leaked out.

Solly spokesman Robert F. Baker says the ad and its timing were Buffett's ideas. "He wanted to get the message out to all our constituencies as quickly as possible," he says. But the information was "tightly and absolutely guarded inside the firm." The ad was prepared on Oct. 28 by Doremus & Co., an advertising and public-relations firm.

Ray Zipko, a Doremus executive vice-president, says his company, which regularly prepares market-sensitive documents for Wall Street, took its usual precautions to keep the information under wraps. "We didn't even get the numbers until about 11 a.m. or 11:30 a.m.," he says. While in preparation, he adds, access to the material was restricted. The ad space was reserved in Doremus' name, so as not to tip off the media. Zipko says the ad was delivered to the New York papers by company messengers at about 6:45 p.m.—and by satellite to Washington a bit later.

Some participants say the pre-earnings market talk about Salomon had been turning positive, so they're not surprised people tried to buy in advance of the earnings announcement. "People now realize Solly has a broken arm, not a broken neck," says James Gipson of Pacific Financial Research.

Perhaps those who plunged into Solly stock on the eve of the announcement were only guessing. But it would be ironic if, at the very time the brokerage firm is trying to clean up its own tarnished image from the bond-trading scandal, the old specter of insider trading should come to the fore.

By Jeffrey M. Laderman in New York

WHEN 19,000 CAREERS ARE ON THE LINE

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INSURANCE

EXECUTIVE LIFE: A SAGA IN SEARCH OF AN ENDING

A shoestring trade group wins the busted insurer—for now

Welcome to what could be the exciting endgame at Executive Life. The busted Los Angeles insurer, suffering from a malignant collection of junk bonds, was put up for auction and attracted a horde of eager bidders. Then John Garamendi, California's insurance regulator, surprised everybody on Oct. 24, when he conditionally chose the winner: a thinly capitalized trade association with eight staffers operating out of a small office in the suburbs of Washington.

The National Organization of Life & Health Guaranty Assns. (NOLHGA) represents the state funds operated by the insurance industry to pay off policyholders when insurers collapse. NOLHGA's bid, declares President Eden D. Sarfaty, "is backed by the power of the entire insurance industry." Garamendi passed over such heavyweight bidders as a French investment group led by giant insurer MAAF and the San Francisco investment banking firm of Hellman & Friedman.

But this isn't the end of the story. While nothing has been said publicly, BUSINESS WEEK has learned that Garamendi chose NOLHGA in the hopes that it would foster his preferred solution: a bailout by just a few huge U. S. insurers.

Executive Life Insurance Co. of California's failure in April was the second-largest in history. The junk-market collapse caused the value of its huge junk portfolio to plummet—to a fraction of its $9 billion face value. That left the company unable to meet the needs of its 350,000 customers nationwide.

SHARP DOWNDRAFT. After seizing Executive Life, Garamendi decided the best course was not to break it up but to sell it as an entity. But he has qualms about many of the eight bidders, including NOLHGA. The plan proposed by NOLHGA, in effect, enlists the resources of the nation's 2,300 healthy insurers through assessments by their state guaranty funds. But Garamendi is worried that the 50 state funds might not be able to handle the impact on Executive's junk portfolio of an additional sharp downdraft in the junk market during the five years that the cleanup is expected to take.

Karl L. Rubinstein, a lawyer who has been hired by Garamendi to oversee Executive Life, argues that a small alliance of strong industry players is needed to handle the large and complex risks of Executive Life's giant junk pile. "If there is a bullet, let them stand in front of it," he says.

A canny and ambitious politician, Garamendi saw that selecting NOLHGA's bid was the best opening gambit to bring about a rescue somewhat similar to that of Baldwin-United Corp. in 1983 by Metropolitan Life Insurance Co., the No. U. S. insurer. On its face, the NOLHGA plan is the kindest to Executive Life's long-suffering customers. If its plan falls through, Garamendi can argue that he at least tried to get the best deal for policyholders. NOLHGA would value the company's annuity and life-insurance policies at 89¢ on the dollar, compared with 87¢ for MAAF and 85¢ for Hellman & Friedman.

NOLHGA'S SARFATY: THE INSURANCE INDUSTRY BACKED HIS BID

> Insurance czar Garamendi awarded the bid in hopes of eventually fostering a bailout by a few huge U.S. insurers

MISSION IMPOSSIBLE? Still, there are defects in the plan. NOLHGA's bid of nearly $1 billion contains just $5 million in cash, with the rest in promissory notes backed by surcharges on every insurer. And the NOLHGA plan assumes no more catastrophic clysms in the junk market.

To force the industry to opt for his consortium remedy, Garamendi gave NOLHGA the almost impossible task of correcting nine flaws he sees in its proposal by Nov. 1. Otherwise, he said, he would pick one of the second-place bidders—that is, MAAF or Hellman & Friedman. Among other things, he wants assurances that someone will fund Executive Life if NOLHGA falters—and that it is legal for the guarantee funds to take over the company.

The industry would like to clean up its own mess. Executive Life, Mutual Benefit and several other recent insurance pratfalls have undermined consumer confidence in insurers generally. Worse, these meltdowns have prompted Congress to look at federalizing insurance regulation—which is anathema to the industry.

The nation's largest insurers, though, are leery of taking the risk of organizing their own bailout. Harry G. Hohn, CEO of New York Life Insurance Co., the No. 6 insurer, says that Garamendi is "asking for a bit too much."

Nonetheless, a compromise may be in the works. BUSINESS WEEK has learned that several industry players, sparked by Pacific Mutual Life Insurance Co. of Newport Beach, Calif., want to meet Garamendi halfway by getting perhaps the top 25 insurers to guarantee NOLHGA's bid. Garamendi is said to be willing to listen. But given Executive Life's tortuous history, a few more moves seem likely before this game is over.

By Kathleen Kerwin in Los Angeles with Larry Light in New York and Tim Smart in Washington

LEARNING THE ROPES

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BY GENE G. MARCIAL

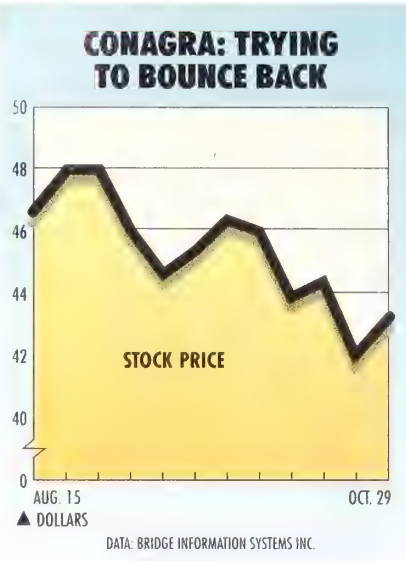
IS THE STREET OVERLOOKING CONAGRA'S BOUNTY?

When major players start dumping a stock, should investors avoid it like the plague? Not necessarily. At least not when the company is ConAgra, the nation's second-largest food processor. True, buyout specialist Kohlberg Kravis Roberts sold a 10.9 million block, or 7% of ConAgra's shares outstanding, in September, and Salomon Brothers followed by unloading 7 million shares in October. But with the stock now at 43, down from a high of 48 in August, some savvy pros are convinced that the shares are a compelling buy.

"ConAgra represents excellent value," says Boston money manager Larry Marks, managing partner of Harbor Capital Management. Marks, who has been buying, thinks the Street has yet to grasp ConAgra's tremendous growth potential, noting that "it has always been valued at a significant discount to the rest of the food group."

Marks explains that acquisitions have transformed ConAgra from a purely commodity-based company into a food processor with annual sales of nearly $20 billion. He notes that for the past 10 years, ConAgra has posted compounded earnings growth exceeding 20% and a return on equity averaging over 22% annually. "Entrepreneurial management, disciplined financial standards, and a strategy giving the consumer 'better food' are behind the company's success," says Marks.

WHAT'S COOKING. He thinks that ConAgra, which acquired major food-products maker Beatrice in August, 1990, and Golden Valley Microwave Foods in July, 1991, will continue to expand through acquisitions. Internally, Marks expects ConAgra's growth over the next three years to be driven by a recovery in meat-processing margins, accelerated profits in its frozen and dry grocery operations spurred by Healthy Choice and Hunt/Wesson products, and reduction of debt. ConAgra's prepared-foods division accounts for 78% of earnings, and its Agri-Products unit, which sells crop-protection chemicals, fertilizers, and animal feeds, contributes 12%. The trading and processing unit, which trades agricultural commodities and operates the U. S.' largest flour mill, accounts for 10%.



Marks sees net jumping to $2.50 in the year ending May 30, 1992, and to $2.90 in fiscal 1993 from $2.13 in fiscal 1991. He thinks the stock will hit 60 in 12 months.

Analyst Stephen Carnes of Piper, Jaffray & Hopwood is just as bullish on the stock as Marks is: "The company is one of the best long-term global bets around." He thinks the Soviet Union will become a new source of growth overseas, and that "ConAgra could become the major U. S. supplier of food." Carnes figures the stock could hit 100 in the next three years.

DON'T DISCOUNT THIS DISCOUNTER

Bargains may abound at Syms, a big off-price apparel retailer. But to some Street pros, the real deal is its stock, now at 9—about equal to the company's book value and at a modest price-earnings ratio of 8. "With its niche business, Syms could be worth 15 to 18 times earnings," says Clairvest President George Clairmont, who has been snapping up shares.

Based on his earnings estimate of $1.10 a share for next year, Clairmont thinks the stock could double in the next 12 months. The recession hurt Syms's 1990 earnings, which fell—after rising for four consecutive years—to 80¢ from $1.09 in 1989. For 1991, Clairmont expects 90¢ a share.

Primarily located in the Northeast and mid-Atlantic regions, Syms operates 27 stores in 17 major markets. The company uses a preset discounting system whereby merchandise that doesn't sell in 10 days is marked down a certain percentage. If the clothing, mostly overruns or closeouts by famous designers, still hasn't sold in the following five days, the price gets cut again.

Chairman and CEO Sy Syms and daughter Marcy, the company's president and chief operating officer, own 80% of the stock. Rather than pull back during this recession, Syms says he has been scouting for new locations, mainly in Chicago, Boston, and New York, to "expand visibly."

With no debt, Syms has been able to finance its expansion from cash flow. "It's about the only unleveraged big retailer in New York," says one New York money manager, who speculates that the family may take the company private since its stock is so cheap. Sy Syms says he isn't thinking of buying back stock—or selling out—but "at $25 a share, we may be tempted."

SUCCESSFUL SURGERY AT CYANAMID

'Watch the stock of American Cyanamid pop from here on." That's what one New York money manager says now that word of Cyanamid's conversion into a medical-products company is starting to spread. Cyanamid's program to divest most of its chemical operations is well on its way. On Oct. 24, Standard & Poor's reclassified Cyanamid by moving its stock, now selling at 64, from Diversified Chemicals to Diversified Health Care.

What's not yet generally appreciated is the extent of Cyanamid's move into equipment for MIS, or minimally invasive surgery. In MIS, surgeons manipulate instruments inserted into the body through small incisions. It has become the procedure of choice for gall-bladder and several other types of surgery. In the next six months, the company's Davis & Geck unit will introduce a line of hand-held instruments for laparoscopic MIS, including an atraumatic grasper, a retraction grasper, dissector, hooked scissors, and needle-holder.

"As a streamlined company getting 50% to 60% of earnings from health care, Cyanamid deserves a higher p-e," argues analyst Harvey Stober of Dean Witter Reynolds. Some big investors say MIS should push Cyanamid's p-e, now 16, to the 20-plus level accorded most drug stocks. In the next 6 to 12 months, Stober expects Cyanamid to trade at a p-e at least equal to the market's, which should push the stock up to the 80s.

DITED BY ROBERT BUDERI

ETTER-LOOKING RADAR DISHES AY WORK BETTER, TOO

Those radar, telecommunications, and satellite dishes dotting many hillsides stand in stark contrast to their surroundings. But soon, the contrast may not be so great: Georgia Institute of Technology engineers say designing the round dishes with edges akin to flower petals can boost signal quality.

One problem with conventional receivers is idelobe" radiation. This occurs because the electrical field eated across the antenna surface to maximize signal gain ruptly ends at the dish's edge, creating diffraction of the ergy field and degrading the signal. Solutions to this prob-m are generally costly. Now, a team led by Georgia Tech rofessor Edward B. Joy has found that serrated edges cause e field to taper off, minimizing unwanted diffraction. And y says they can be built into dishes with little extra cost. The new design is being tested at the U. S. Army's Electron- Proving Grounds in Arizona. If it works like the computer odels, flower power could take on a new meaning.

POWER-PINCHING WAY O RECYCLE RUST-PROOF STEEL

Since the early 1980s, thanks to demand for rust-resistant cars, galvanized steel has soared to about 15% of the steel roduced in the U. S. But that has created a problem. Argonne ational Laboratory engineer Edward J. Daniels says studies ow that the cost of recycling galvanized scrap from cars and ucks, including environmental-control systems that capture xic zinc, runs a hefty $50 per ton.

Now, however, Argonne and Canadian waste management mpany Metal Recovery Industries Inc. in Hamilton, Ont., ave developed a new degalvanizing process they say can ash these costs. Galvanized scrap is placed in vats of sodium ydroxide, and an electric current is applied to remove the nc. The zinc collects on an electrode, from which it can be sily collected and recycled. The process, which uses less ergy than current degalvanizing methods, could save the quivalent of 9 million barrels of oil annually, says Edwards. etal Recovery hopes to open a pilot degalvanizing facility in ast Chicago, Ind., by mid-1992.

OULD A HOTTER SUN BE THE CULPRIT N GLOBAL WARMING?

No doubt one of the great scientific questions of our time is whether the tons of carbon dioxide being spewed into he atmosphere are dangerously warming the earth. While it is ear that average temperatures have risen slightly over the st century, not everyone is yet convinced that CO_2 is respon-ble. A new study, reported in the current issue of the journal *cience*, adds more fuel to the debate.

Researchers at the Danish Meteorological Institute compared the length of sunspot cycles to temperature records. They found that when the sun becomes more active, the earth warms up. When the sun quiets, as it did in the 1950s and 1960s, temperatures take a dip. As a result, the scientists suggest, the sun's fickle moods may be more important than CO_2 in determining global temperatures.

Some researchers warn that measurements of the sun's power are too imprecise to prove that changes in solar activity are altering the climate. The Danish team says the correlation is too strong to ignore, indicating that the debate is more complex than generally thought.

HELPING KILLER T-CELLS GUN DOWN CANCER

One of the many strategies employed to fight cancer is helping the body's own defense system seek out and destroy invaders. One way to do this is to ship in help—in the form of cells doctored to contain copies of the genes that control the body's natural immune response. Now, using this technique, scientists at Johns Hopkins Medical Center in Baltimore have cured renal cancer in mice.

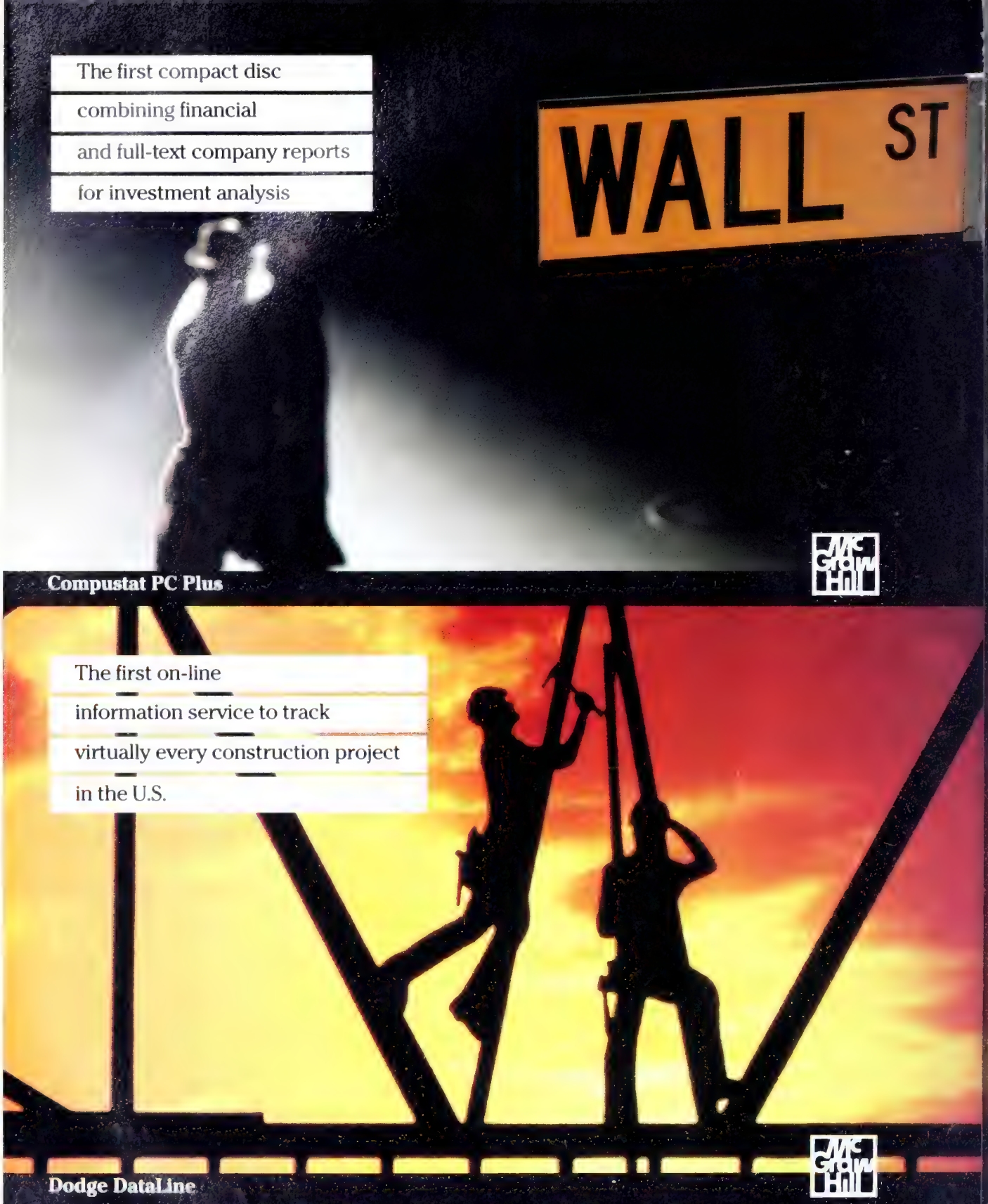
The researchers injected mice with cells that had been genetically altered to secrete interleukin-4, a substance normally produced by white blood cells to mobilize other cells whose job is to fight off attacks on the immune system. For poorly understood reasons, these other cells, called killer T-cells, normally aren't triggered in cancer cases. But with the help of the interleukin-4, not only were they triggered around the original tumor, the T-cells roamed the body shooting down cancer cells growing at distant locations. That's the first time such a correction has been demonstrated, according to immunologist Drew Pardoll, head of the Johns Hopkins team. Pardoll says that before testing the technique in humans he wants to undertake further experiments in animals using different combinations of immune-boosting substances.

MASS-PRODUCED BREAD THAT HAS A HOME-BAKED FLAVOR

M. E. COHEN

Bakeries have long tried to match the quality of home-baked bread. Now, scientists at the University of California at Berkeley say they may have the answer: an enzyme called thioredoxin found in the seeds of wheat.

Strong, elastic dough rises best and yields the tastiest bread. Research headed by Berkeley plant biochemist Bob B. Buchanan and visiting French chemist Karoly Kobrehel indicates the key to strength is breaking sulfur bonds in dough so proteins can form a tight lattice. This isn't a problem with high-quality flour. And at home, lesser-quality dough can be kneaded to reach the proper consistency. But bakeries have tight production parameters. So they have sought to strengthen dough with substances such as bromates, which have been linked to cancer. The new studies show that adding thioredoxin can also work. Next comes mass-producing bread using that method. The team is seeking pilot funding but so far has gotten a rise only from a few European companies.



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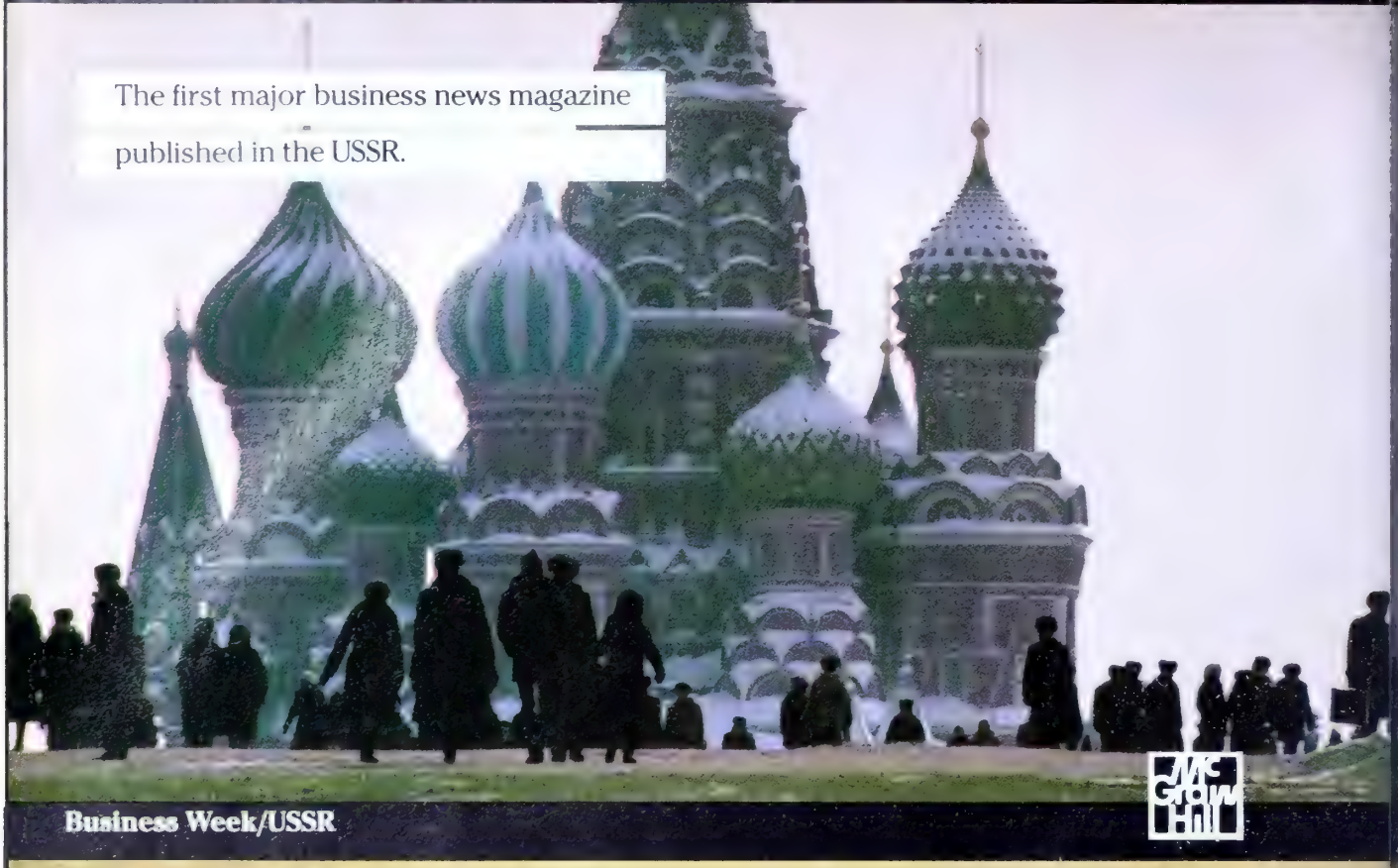

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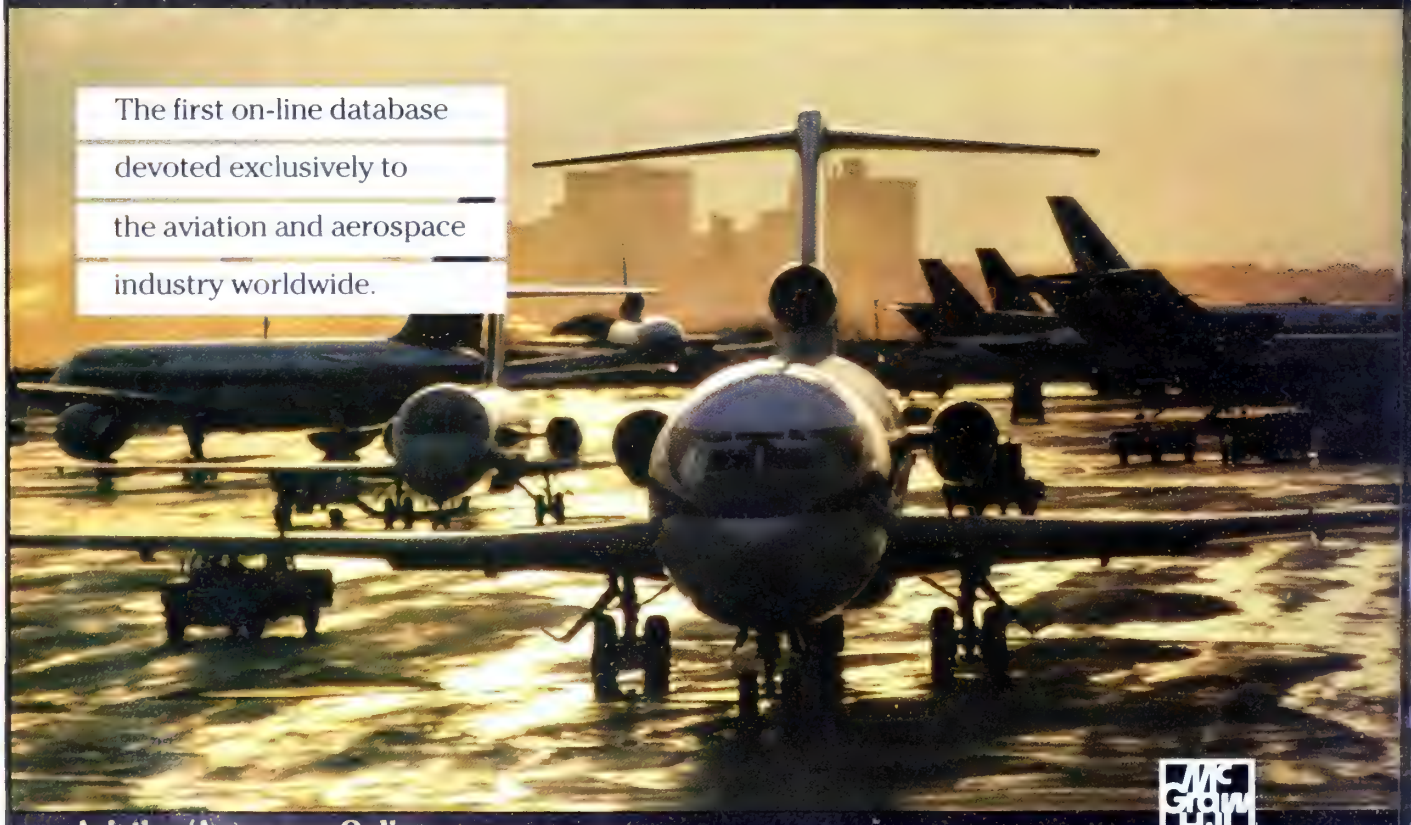

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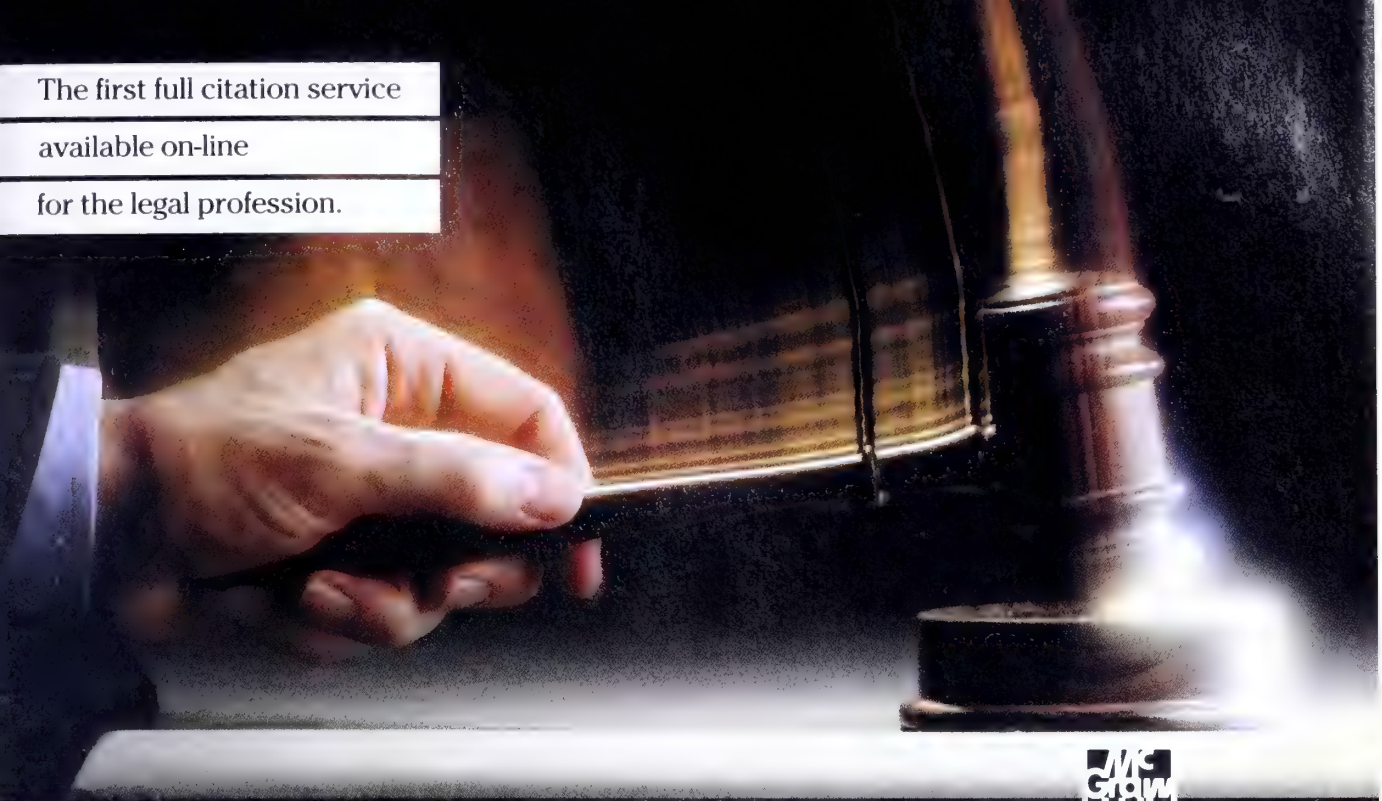

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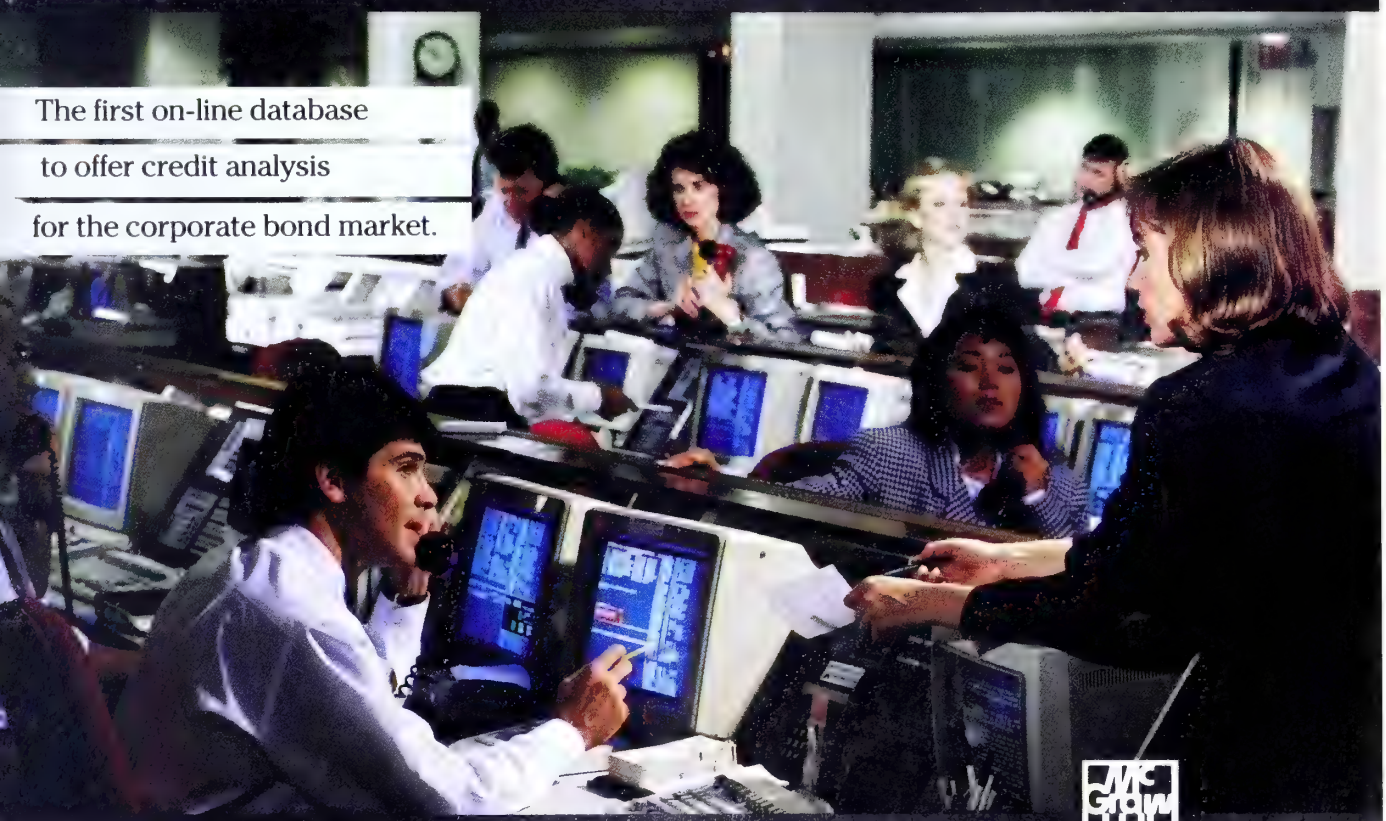

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MATERIALS

BUILDING NEW MATERIALS FROM WHAT'S LYING AROUND

Japan's R&D expands on others' discoveries—profitably, of course

After Soviet scientists made the stunning announcement in 1977 that they had created diamond films from carbon vapor, Japan was the first to duplicate the results. Its National Institute for Research in Inorganic Materials immediately gave the technique, called chemical vapor deposition (CVD), to a dozen Japanese corporate labs. The goal: develop diamond films for use in lightning-fast microchips.

Diamond chips may still be a distant possibility. But six Japanese companies are selling CVD diamond-cutting tools for fine machining. Because these cutters are sturdier than rival tools, analysts expect world demand to leap next year, from less than $1 million to $36 million. General Electric Co. is the only serious American competitor.

MASS APPEAL. Diamond films reveal a familiar pattern. In the mid-1980s, hundreds of Japanese companies plunged into new-materials research. Some are chasing exotic substances, such as "intelligent" compounds that adapt to their environment. But others are focusing on improved conventional substances, from semiconductor materials to new polymers and metal alloys, many of them pioneered elsewhere. "Revolutionary materials are like spice in the dinner," says Yasuaki Mori, director for new materials policy at the Ministry of International Trade & Industry—nice, but no substitute for the main course.

Indeed, by the year 2000, MITI reckons, Japan will consume up to $90 billion a year in new versions of polymers, metals, ceramics, and composites. That's a fourfold increase from the late 1980s and an indicator of Japan's increasing prowess. While U. S. companies still lead in composites and ceramics for aerospace uses, they are losing ground in technology to manufacture new substances in bulk. And in new materials aimed at high-volume products—from semiconductor devices to cars and sports equipment—Japan is on top.

Japanese steel and chemical companies should reap big windfalls from better conventional materials. And so will manufacturers of devices based on these substances. Look at the new flat-panel displays announced in September by Canon Inc. The screens are made of ferroelectric materials (FLCs), whose structure allows them to "remember" stored information. FLCs were discovered in the 1950s and fashioned into crude displays by French scientists in the 1970s. But only Canon has developed a viable commercial device. The picture quality of Canon's displays rivals existing liquid crystal displays that use active-matrix technology, in which each picture element is controlled by a separate transistor. And, notes Canon President Keizo Yamaji, FLC screens will be far easier to manufacture in large sizes at higher volumes. Those advantages could translate into $230 million in revenues for Canon by 1995.

The saga of gallium arsenide, used for electronic circuits in satellites and high-speed chips for supercomputers, is much the same. GE researchers pioneered these compound semiconductor materials and devices in the early 1960s. But now, sales of Japanese gallium arsenide devices have topped $1.4 billion a year—mostly for diodes in lasers—according to Fuji Keizai Co., a Tokyo consulting firm. Japanese firms dominate two-thirds of the world market and supply nearly all the processed wafer to make gallium arsenide chips. And in April, Fujitsu Ltd. completed the world's first full-scale mass-production facility for gallium arsenide chips. The plant produces high-speed gate arrays used in advanced workstations and supercomputers. These chips are faster and consume less power than comparable silicon devices.

MISSED CHANCES. While U. S. electronics firms licensed away their breakthroughs in television and VCRs, materials companies divested theirs to foreign competitors. In 1990, after deciding to focus more on its core businesses, Monsanto Co. sold the last of its gallium arsenide wafer business as part of a joint venture to partner Mitsubishi Corp. The next great missed opportunity for the U. S. may be hydrogen-storing alloys that are used in tiny batteries for cellular phones, camcorders, and notebook computers. These metals were developed at Brookhaven National Laboratory in New York in 1964. Japanese researchers flocked to the lab in the late 1960s, says Lee Huston, a former contract scientist for Brookhaven. "By the early 1980s, Japan was going full gear," he says. But then, research support from the Energy Dept. to labs and companies dried up, and "U. S. labs stopped

JAPAN'S MATERIAL GOALS

Material/Projected market in the year 2000

POLYMERS $16.7 BILLION

- **ENGINEERING PLASTICS** Heat-resistant resins used in automobiles and electronics products
- **POLYMER ALLOYS** Combinations of polymers that are stronger and more durable. Used in car front fenders
- **SEPARATION MEMBRANES** Used in kidney dialyzers and to separate viruses from blood

INORGANICS $26.8-$50.7 BILLION

- **IC PACKAGES** Ceramic housings for semiconductors
- **OPTICAL FIBERS** They transmit data in the form of pulses of light
- **GALLIUM ARSENIDE** Used both for semiconductor devices in satellite communications and supercomputers, and as substrate for laser diodes found in compact-disk players

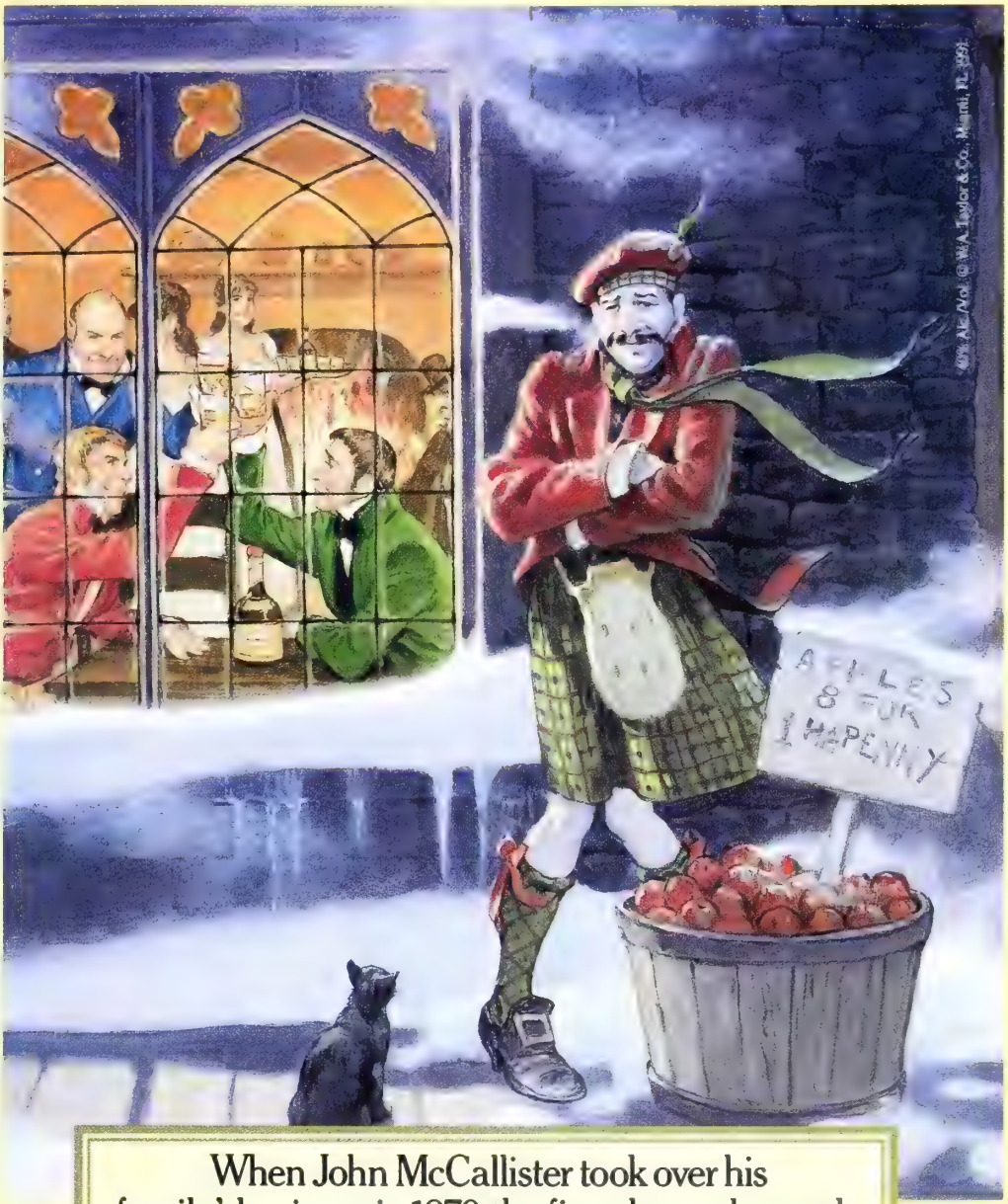
METALS $16.8 BILLION

- **SEMICONDUCTOR MATERIALS** Used to make integrated circuits
- **HYDROGEN STORAGE ALLOYS** Used for air-conditioning systems and fuel cells for hydrogen-powered autos

COMPOSITES $12.9 BILLION

- **GLASS FIBER REINFORCED PLASTIC** Found in everything from bathtubs to fishing boats and automobiles
- **CARBON FIBER REINFORCED PLASTIC** Used in fishing rods, airplanes, satellites, and golf clubs

DATA: MINISTRY OF INTERNATIONAL TRADE & INDUSTRY, BW



When John McCallister took over his family's business in 1870, the first change he made was to stop serving Drambuie to his clients. A year later, he was freelancing.

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putting anything into hydride research."

Last year, Matsushita, Sanyo, Hitachi, and Toshiba were the first out with nickel-hydride batteries, which last twice as long as popular nickel-cadmium batteries. Matsushita Electric Industrial Co. supplies batteries for its own videocameras and sells to Sony Corp. for that company's 8mm products. Industry leader Sanyo Electric Co. currently cranks out 1.6 million units a month, bound for Toshiba Corp. laptops and Motorola Inc. radio gear. And it intends to boost production to three million units to supply a market that could swell to more than $250 million next year.

CERAMIC ENGINES. As Japanese companies have mastered technologies, they have used superior manufacturing techniques to help dominate markets. Take ceramics, which include integrated-circuit housings and parts for autos and aircraft. The niche, which already is worth $9 billion a year in production value for Japanese companies, will balloon to $43 billion by the end of the decade, says the Japan Fine Ceramics Assn. For now, chip packages drive the boom. But engines will be next. Still in the prototype stage, engines with mostly ceramic parts could show up in cars by 1995. The selling point: greater energy efficiency born of higher-temperature combustion that ceramics make possible.

As new markets materialize, a few companies such as Kyocera Corp., which already owns 60% of the world market for ceramic IC packages, will clean up. "Kyocera should be one of the most successful growth companies of the 1990s," says Barry Dargan, head of research at James Capel Pacific Ltd. He also sees good times for Toray Industries Inc., the inventor of carbon fibers used in golf clubs, fishing poles, and now airplanes. Carbon fiber shipments for the tail of the Boeing 777 could generate $600 million in revenue in the next 20 years, says Capel. The material is 4% of Toray's revenues, but adds 10% to its bottom line.

> By chasing quick licensing revenues, U.S. companies fortified Japanese rivals

Japan also continues to seed research on more radical technology. Since 1989, MITI has kicked off four advanced materials projects and is spending $3 million to $13 million a year on them. The biggest aims to develop materials that withstand heat up to 3,600 F. Another seeks optoelectronic materials suitable for high-density recording in supercomputers. Yet another will look at silicon-based polymers that combine the electrical features of silicon with the lightweight of plastics for use in aerospace and construction. One project will develop process technology to help transfer these substances from lab to factory.

Some U. S. scientists blame poor technology management inside American companies for giving Japan a leg up in new materials. U. S. managers erred by chasing after quick licensing revenues over several decades while skimping on manufacturing investment. "They expect the rest of us to compensate by inventing faster," says Nick Holonyak, one of GE's gallium arsenide pioneers, now at the University of Illinois. "But we can't invent that fast." Now, Japan is showing that it can improve and sell the most banal composites and polymers. They may not win Nobel prizes, but they'll make money for years to come.

By Neil Gross in Tokyo, with Pam Black in New York

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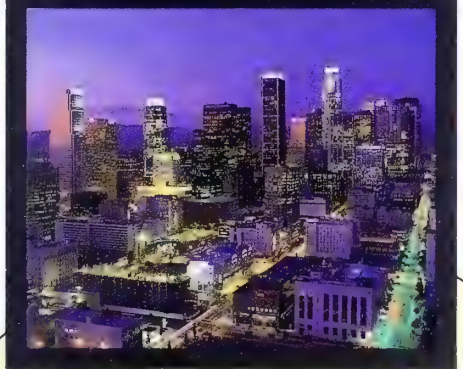
LOS ANGELES

SETTING THE PACE IN THE GLOBAL MARKETPLACE



Top, courtesy of Rockwell International Corporation; middle, Doug Mazzapica/Black Star; bottom, Hiroyuki Matsumoto/Black Star

LOCATION: *Los Angeles*

CONCEPT: *A business version of the common Hollywood myth.*

SYNOPSIS: *Young entrepreneur comes to town to make his fortune. He starts a small business. After a slow start, sales begin to take off. A recession hits, but the company rides it out. The business grows...eventually goes public. Taking advantage of L.A.'s key position on the Pacific Rim, the company expands overseas. The entrepreneur becomes a millionaire.*

Myth? Not at all. For many businesses in the Los Angeles area, scenarios like this are part of company history. During the last decade, Los Angeles emerged as a pre-eminent business center, not only for the U.S. but for the entire Pacific Rim. A sophisticated, multi-cultural city, L.A. is now recognized as the financial and geographical hub of international commerce between East and West – Asia and America – and North and South – the Americas.

Gone are the days when the Los Angeles economy was based almost entirely on the aerospace industry, motion picture/TV production, and tourism. Today, the L.A. economic pie is divided among dozens of industries, and the largest employers are business and management services, tourism, wholesale trade/distribution, aerospace/high tech, health services, financial services, textiles and apparel, and entertainment.

Los Angeles County is the largest manufacturing center in the U.S., both in terms of employment and value of output, ahead of Chicago, New York, and Detroit. Thousands of companies – from the multinational high-tech manufacturer to the small start-up venture – are churning out a world of goods, from processed foods to high-tech computer components to hair care products to furniture.

Why L.A.? As a market in its own right, the L.A. area is hard

LOS ANGELES

Setting the Pace in the Global Marketplace

to beat. The tiny agricultural village founded by 11 families in 1781 has exploded into a a five-county megalopolis encompassing 34,000 square miles and 14,000,000 people. If Greater L.A. were a separate state, it would rank fourth in population in the U.S., behind only Texas, New York, and the whole state of California.

The L.A. area packs an immense economic wallop. L.A. has more high-income households ($50,000 in buying income or more) than any other U.S. city except New York. Total personal income reached $305.6 billion in 1990, up 126.7% from 1980. If L.A. were a nation, its output of $335.6 billion in 1989 would rank it eleventh in the world!

L.A.'s Burgeoning Services Industry

L.A.'s dynamic growth over the past decade has stirred activity in the service industries, including advertising, personnel services, computer programming, architecture, accounting, legal services, and consulting. From 1980 to 1990, 277,200 new jobs were added in business and management related services.

Financial services also grew tremendously, as U.S. banks expanded their local operations and foreign banks moved in. More than 130 foreign banks currently have offices in the L.A. area.

Cathay Bank in L.A.'s Chinatown started in 1962 as a storefront with seven employees and initial capitalization of half a million dollars. Today, it has expanded into a publicly-traded holding company with total assets of more than $659 million.

"The financial center of the West is now Los Angeles," says Dunson Cheng, Cathay Bank's president and director of the board. "Asian business presence here is significant and more people and wealth are coming in all the time. It is a very good business climate for us."

L.A. IS HOME TO THE MOST MODERN AIRPORT FACILITY IN THE WORLD.

A Great Place to Visit

The L.A. area's temperate weather, theme parks, beaches, motion picture studios – and even its trend-setting shopping malls – drew 62 million visitors in 1990. They pumped $8.8 billion into the economy. Plans now in progress should push those numbers even higher through expansions of Disneyland, Universal Studios, Magic Mountain, and the downtown L.A. Convention Center, due to open mid-1993.

L.A.'s cultural attractions delight tourists and residents alike. During the '80s, mainstays like the Los Angeles Philharmonic Orchestra were joined by new art groups and facilities: the Orange County Performing Arts Center, the Museum of Contemporary Art in downtown L.A., the Autry Western Heritage Museum in Griffith Park, and the Music Center Opera Company, among them. Ground will break soon on the spectacularly-designed Disney Hall concert facility, and the new Getty Museum. Numerous regional, ethnic and alternative theater, and art organizations broaden the already diverse array of cultural offerings.

"Soon tourism will be the largest industry in the world," says Michael Collins, vice president of public relations for the L.A. Convention and Visitors Bureau. "People are choosing between not only Aspen and Aruba, but Scotland and Eastern Europe and many other destinations. We can honestly say that a visitor will get more from L.A. than any other location on earth because of our tremendous diversity."

Tracking the High-Tech Evolution

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LOS ANGELES

Setting the Pace in the Global Marketplace

lion in shipments in 1990. But as peace spreads and demand for defense production declines, coalitions have formed to help convert defense-oriented firms into competitive players in the consumer marketplace. One high-profile group is busy figuring out how to use aerospace techniques in the production of electric cars.

L.A. has become a high-tech land of opportunity. The aerospace industry's highly trained workers and cutting-edge technologies provide a tremendous resource for other high-tech companies.

"This area is now better than Silicon Valley for us," says David Kirkey, vice president of international sales and worldwide marketing at Advanced Logic Research (ALR) in Irvine. "L.A. is a major market for the good employees and engineering talent ALR requires. And the subcontractors, many of whom have worked with the aerospace industry, are familiar with our high-tech and high-quality requirements."

One of L.A.'s more dramatic success stories, ALR has grown from seven employees and $1 million in sales in 1985 to 700-plus employees and projected sales of $220 million in 1991. The company was recently selected as the sole supplier of microcomputers for the Central Statistics Office of Poland.

Healthy Trends in Health Care Services

A thriving health care industry has grown up around the four medical schools and two dental schools located in the five-county L.A. area. In the 1980s, nearly 90,000 employees swelled the ranks of the industry, which includes several world-renowned medical facilities.

Near right: **MAYOR TOM BRADLEY** *Far right:* **L.A.'S MANY CULTURAL ATTRACTIONS DELIGHT TOURISTS AND RESIDENTS.**

Sewing Up a Corner of the Apparel Market

Many people are surprised to learn that L.A. has a thriving garment industry – with shipments of $7 billion and employment near 117,000 in 1989. The local apparel/textile trade is supported by several excellent training institutions, the costume needs and exposure of the entertainment industry, and L.A.'s generally more open business climate. Many designers and textile workers, unable to penetrate New York's tight-knit industry, have found success in L.A.

Let Us Entertain You

One of L.A.'s oldest industries, motion picture and television production, contributes far more to the economy than its $10.5 billion in receipts would indicate. According to Bill Shields, chairman of the American Film Marketing Association, every production made in L.A. involves 400 or more people who pump their own money into the local economy.

"There is an underlying strength to the entertainment business in L.A. even during down cycles," says Shields. "The infrastructure and expertise cannot be duplicated anywhere else in the world."

Increasingly, L.A.'s entertainment industry is venturing across the oceans to tap those world markets. Says Christine Hansen of MCA-Universal Studios: "Television is growing in Eastern Europe and other areas. There are great opportunities out there for the whole industry if you think globally, not just domestically."

Building the Dream

Industry statistics, though helpful, cannot begin to capture the dynamism that draws people and businesses to

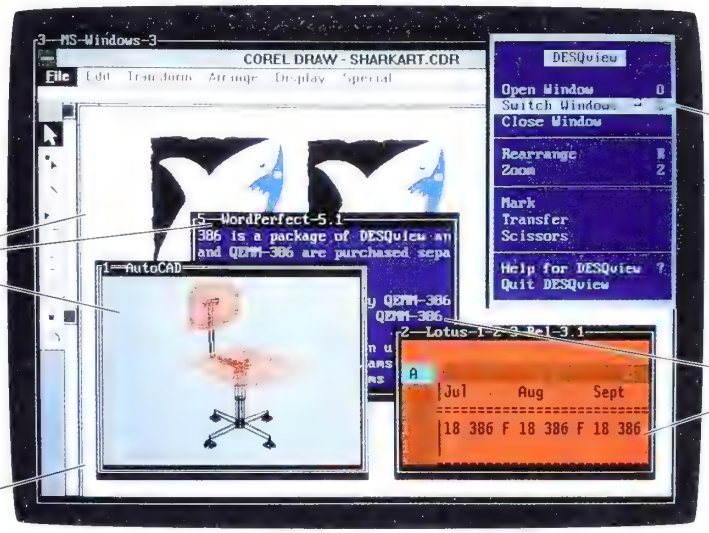
Better Windows

Solve memory problems
QEMM 386 makes the most of every last 'K'. DESQview uses that memory to run multiple programs.

Multitask
Run multiple programs side-by-side in windows. 'Background' programs can continue to run.

See text and graphics side-by-side
Reference information in your graphics program while writing your report.

Run Windows programs
DESQview even lets you run Microsoft Windows.



Easy menu access to programs and DOS services
Access programs or DOS in a window with just a few keystrokes or mouse clicks. It's that simple.

See multiple files
If your programs allow it, DESQview lets you run the same program in two or more windows. Great for comparing files

Cut and paste data
Transfer data between programs with a few keystrokes.

Handle large programs
Run standard DOS programs side-by-side with DOS-extended programs like 1-2-3 Release 3.

DESQview. The Multitasking, Windowing Environment.

nce the power user's secret, ESQview has been discovered by mputer knowledgeable people erywhere. Over 1,000,000 people ve bought DESQview.

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Multitasking; windowing, using keyboard or mouse commands, s all easy with DESQview.

DESQview 386 2.3 lets you use your favorite DOS and DOS-tended programs in windows side-by-side on 386SX, 80386 and 86 PCs. As you can see above, you can even run Microsoft Windows within DESQview.

DESQview 2.3 gives 8088, 8086 and 286 PCs with additional memory most of the same capabilities with surprisingly little performance trade-off.

Whatever programs you use—DOS, extended DOS or Windows—and whatever hardware you have, whether 8088 or i486 or something in between, DESQview is still the best way to get the most out of the hardware and software you own today.

DESQview. When you look into it, it's the obvious choice.

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LOS ANGELES

Setting the Pace in the Global Marketplace

Los Angeles year after year. Major cities carry with them a mythology, a certain attitude or idea: New York is the Big Apple. Chicago is the city of the Big Shoulders. Los Angeles could well be called the city of Big Dreams.

"We see the future here," says Jim Miscoll, vice-chairman of the board of Bank of America, which recently merged with Security Pacific Bank. "When L.A. started out, it was a desert. So people planted trees. There was no natural port, so they built one. People had a dream and made it happen. That's still happening."

Today's dreamers include international investors, entrepreneurs, and immigrants from all over the globe.

In 1980, three immigrant engineers mortgaged their homes, pooled $12,000 in cash, and gave the initials of their first names to launch AST Research, Inc. Today, the computer maker has all but captured the number three spot behind IBM and Compaq with its aggressive pricing and upgradeable machines which never become obsolete. In 1990, AST's share price on Wall Street soared 259%, more than any other company traded on a major stock exchange. AST distributes products in 89 countries and operates manufacturing facilities in Taiwan and Hong Kong.

In 1981, Choong Hoon Cho, the chairman of Korean Air, quietly directed the acquisition of the largest and most sophisticated cargo storage facility on the West Coast at Los Angeles International Airport. "People thought he was a little crazy," says J.J. Lee, general manager of cargo marketing. "But with all the growth in trade with the Pacific Rim, that huge facility is now too small."

Korean Air has experienced double-digit growth every year and leads all other transpacific carriers in international cargo tonnage in and out of LAX.

Going Global Right at Home

While dozens of companies like Korean Air and AST are using L.A. as a launching pad to worldwide markets, others are finding a significant international market right outside their front doors. Because of dramatic population shifts over the past two decades, L.A. is now home to at least 89 different ethnic groups. The area boasts the largest Philippine, Chinese, and Korean populations outside those countries. Only Mexico City and Guadalajara have larger Mexican populations.

Top: **L.A. HAS MORE COLLEGES AND UNIVERSITIES THAN 45 AMERICAN STATES.** *Bottom:* **PLANS ARE CURRENTLY UNDERWAY FOR EXPANSIONS OF MANY TOURIST ATTRACTIONS IN L.A.**

These realities give new meaning to the term "melting pot" and open up tremendous marketing opportunities. "There's a sufficient international market right here in L.A. to sustain a company as it gears up to go global," says Merry Tuten, president and CEO of the Greater Los Angeles World Trade Center Association, the fastest-growing world trade organization in the country. "There's a talent pool and knowledge base here that you won't find in other cities. If you have a question about doing business in a foreign country, you can talk face to face with business people who live there."

Gateway to the World

As well as providing access to important business contacts, L.A. offers a sophisticated and multi-faceted system for moving goods and people.

Two international airports, three domestic airports and numerous regional airfields connect L.A. with practically any destination on the globe. And owing to an explosion in trade across the Pacific Rim, the Port of Los Angeles, called Worldport LA, edged out New York as the top container port in the country in 1990.

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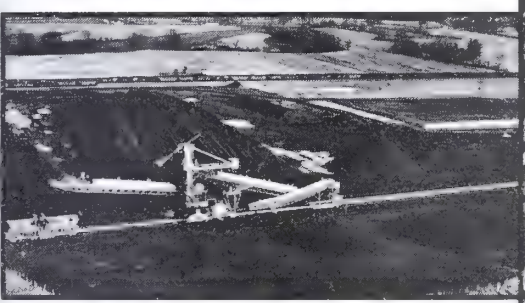

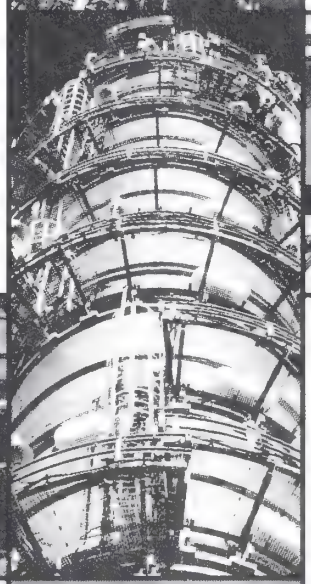

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LOS ANGELES

Setting the Pace in the Global Marketplace

Together, LAX, Worldport LA, and the Port of Long Beach handled $106.8 billion in international trade in 1990, the second highest in the country.

A major expansion now underway will nearly double the two ports' capacities by the year 2020 and create the world's largest integrated marine-highway-rail transportation hub.

Turning Challenges Into Opportunities

While fueling the economy, Los Angeles' phenomenal growth has presented government and business with significant challenges in the areas of transportation, air quality, affordable housing, and waste disposal. "Every major city has these same problems," says Miscoll of Bank of America. "The difference is, we're doing something about them in L.A. In fact, L.A. will be the model for how to solve them."

A prime example can be found at the Los Angeles County Transportation Commission where a "can-do" attitude is palpable. The commission is charged with nothing less than solving the area's traffic congestion problem using any combination of modes of transportation.

Initial plans call for a light rail system (one leg is already operating between downtown L.A. and Long Beach – and to rave reviews), an expanded bus system, and a more efficient freeway system-complete with HOV lanes and dozens of tow trucks ready to move disabled vehicles in minutes.

"The citizens voted for this. It's the greatest local funding effort in the country in transportation," says Neil Peterson, president of the Transportation Commission. "As we see results, I think it will give people confidence to tackle other things."

Meanwhile, on another front, giant utility company Southern California Edison has launched an ambitious effort to retain and recruit manufacturers through energy efficiency incentives, high-tech training, and technical assistance.

"Manufacturing is the bread and butter of any economy," says Barry Sedlik, manager of customer planning services at the utility. "It's in our interest to transform these businesses into highly efficient and productive companies that can compete anywhere in the world. We're looking at what we can do to make them global contenders."

Near right:
A MAJOR EXPANSION IN PROGRESS WILL NEARLY DOUBLE THE CAPACITIES OF THE PORT OF LONG BEACH.
Far right:
L.A. LAKER, MAGIC JOHNSON.

Writing the Script For Your Business

It's difficult to put a label on Los Angeles, though many have tried. And it's equally difficult to capture the many nuances of the area's business climate. Suffice it to say that there is an energy and optimism in L.A. that's immediately noticeable and, eventually, irresistible. That may explain why L.A. is the home to more entrepreneurs and venture capitalists than any other city in the world.

"There's a misconception about L.A. that it is so big that it's difficult to do business here," says Tom Link, editor of the *Los Angeles Business Journal*. "In reality, there are greater opportunities here to start businesses or to advance in your career than in most other areas."

Writing the script for success in business is not without its risks, especially in uncertain economic times. Finding the right location is half the battle. Increasingly, businesses from around the globe will be staking their claim in Los Angeles – the new capital of the Pacific Rim.

This special advertising section was written by Kelsey Menehan, a freelance writer who has worked on a number of Business Week area development sections. Designed by Parham-Santana Inc., NYC.

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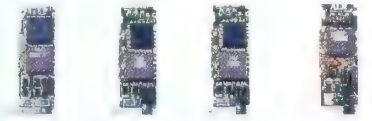

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EDITED BY AMY DUNKIN

Software

ROCKET SCIENCE FOR THE HOME STOCK-PICKER

For years, sophisticated computerized stock-picking has been the province of Wall Street's rocket scientists. But the development of powerful investment software for the home market is enabling more small investors to tap their personal computers to help them make investment choices. With programs once available only to experts, "almost anything a professional can do on Wall Street, an individual investor can do at home," says Frederic Shipley, associate finance professor at Chicago's De Paul University.

About 500 programs, ranging in price from $20 to more than $2,000, offer various kinds of stock market analysis and portfolio-management assistance. Many require data updates to supplement the basic software. You either get current data by mail on floppy disks or use a modem to tap an on-line data base.

STEADY STREAM. To get started in computerized investing, you'd probably benefit most from an IBM-compatible PC, since most investment software has been written for that operating system. Pick a system built around a powerful 80386 chip with at least two megabytes of RAM and a 40-megabyte hard drive. A modem will enable you to download stock quotes and other information from data services.

For current market information, a number of services provide an ongoing stream of stock quotes—either real-time, 15-minute delay, or end-of-day. Active traders prefer the comprehensive, up-to-the-minute capabilities of Data Broadcasting's program (up to $500 a month). But for most small investors, two cheaper programs will suffice: DTN Wall Street or Telemet's Radio Exchange, which offer delayed stock quotes for about $35 a month.

To get down to the nitty gritty of stock-picking, you need a program that does fundamental analysis—comparing stocks based on debt-to-equity, price-to-earnings, and other basic ratios. Such measures can, for instance, help you determine which stocks may be undervalued.

Two of the better screening programs are Value Line's Value/Screen II and MP Software's Market Base (table). Both feature weekly, monthly, or quarterly disk updates. For an extra fee, Value/Screen users can obtain recent stock prices through Dow Jones News/Retrieval, an independent dial-up vendor.

Value Line subscribers may feel more at home with Value/Screen, since it includes the service's proprietary estimates and rankings for safety and timeliness. On the other hand, the extra points Value/Screen gets for familiarity and ease-of-use, it loses in depth. Its database covers only 1,600 stocks, vs. Market Base's 4,600, and it is comparatively thin on historical data for each company. What's more, Market Base offers 10 variables for evaluating each stock—double that of Value/Screen—and allows you to weight each variable to your liking.

Stuart Meibuhr, a retired chemist from Bloomfield Hills, Mich., uses Market Base. During a recent search for undervalued stocks, he asked specifically for companies selling below book value with debt under 20% of capital, and 75% compounded earnings growth since 1987. The program took less than 20 seconds to come up with two candidates.

Budget-minded investors may want to explore a third program: the PC Stock Market Data Bank offered by the nonprofit American Investor Alliance. It isn't as polished as its commercial rivals, but at $55 a year for quarterly

500-company data disks, it ay be the best value. AIA so offers updated stock uotes once a week on an ectronic bulletin board that ou can download for the ice of the call.

After fundamental analysis, e next step is technical anal-sis. This investing tool as-esses whether stocks or mar-et indexes are fairly valued ased on price and trading ends. The computer auto-ates what had been the la-orious task of drawing harts by hand.

EST OF TIME. Many experts ecommend Equis Internation-'s MetaStock-Professional the best entry-level pro-am. By layering its 45 dif-erent technical indicators, etaStock allows novices to se moving averages, while erious practitioners can grad-ate to more complex strate-es common on Wall reet—or even de-se their own for-ulas. A unique ature is its win-owing capability, hich lets users put as any as 30 charts on a ngle screen.

Telescan's Edge and Ana-zer programs are an inter-sting cross between the fun-amental and technical outes. They provide 50 fun-amental benchmarks, includ-g price-to-earnings ratios, n 10,000 stocks and 1,700 mu-al funds. Unlike other pro-rams, Analyzer and Edge on't just spit out reams of w data. Instead, they dis-ay the information in raphs, allowing users to ompare the ratios to histori-l patterns, and even plot oving averages and other in-exes against it. The charts ost a mere pittance com-ared with the price of raw ata from other dial-up ser-ces. You can down-ad an average raph for as little 3¢.

Once you nd a stock to uy, you're prob-bly better off alling your bro-er directly than us-g your computer to execute the trade. While there are no less than eight on-line services, such as America On-Line and Equalizer, that allow you to trade through a discount brokerage, some charge on-line time and extra fees in addition to commissions. Placing orders via computer doesn't gain you direct access to the exchange floor. Nor does it allow investors looking to reduce capital gains to specify which shares from a large block to sell.

A portfolio-management program can help you keep track of your buying and selling. But be careful: To accommodate every possible securities transaction, many management programs attempt to cover every conceivable investment. As a result, you can pay dearly for features you'll probably never need.

The best bargain—a program called PFROI—isn't standard commercial software, but rather one of the best of the so-called "shareware" programs that can be downloaded free, via modem, from computerized bulletin boards. As with most shareware programs, PFROI's authors request a voluntary payment from satisfied users, in this case $29. PFROI is slightly difficult to use, though it does some things its commercial rivals don't, such as computing annualized return of either an entire portfolio or a single investment.

Since most investment software isn't cheap, don't launch into a buying spree until you know what you hope to accomplish. For firsthand advice, look into computerized bulletin boards or any of the 40-odd user groups around the country. The Boston Computer Society (617 252-0600) has an exhaustive library of investment software its members can try out.

TRIAL RUN. The American Association of Individual Investors' $79 annual fee includes a subscription to its bimonthly *Computerized Investing Newsletter* and a 500-page directory of user groups, bulletin boards, and software (312 280-0170). The directory also mentions which software developers offer demonstration copies free or for a nominal charge.

Also, keep a sharp eye on usage fees. De Paul's Shipley says that investors should count usage charges no differently than they do money-management fees: Usage charges shouldn't exceed 1.5% of your portfolio annually.

Granted, just using a computer doesn't guarantee better returns. (Indeed, beware of programs, particularly for technical analysis, that claim to beat the market.) But given the penchant many individuals have for acting on "hot" tips, a computer program "can provide something small investors need most—discipline," says Boston computer consultant Dan Dibartolomeo. And with luck, the trading profits you make will more than pay for your new computerized-investing tools. *Dean Foust*

A SAMPLING OF INVESTMENT SOFTWARE

FUNDAMENTAL ANALYSIS

Program	Cost*	Demo?	Comments
MARKET BASE 617 449-8460	$345	Yes	4,600 stocks; most screening variables
STOCK MARKET DATA BANK 305 561-1900	$55	Yes	3,500 stocks; letter-writing feature
TELESCAN EDGE 713 952-1060	$249	No	10,000 stocks plus 1,700 mutual funds
VALUE/SCREEN II 212 687-3965	$295	Yes	1,600 stocks; uses Value Line ratings

*All prices, except Telescan, based on yearly costs for quarterly disk updates

TECHNICAL ANALYSIS

Program	Cost*	Demo?	Comments
COMPUTRAC 504 895-1474	$695-$1,900	No	Best profitability tester
MARKET ANALYZER 609 520-4642	$349	Yes	Low $25 monthly data fee
METASTOCK-PROFESSIONAL 801 265-8886	$349	Yes	Top entry-level program
TELESCAN ANALYZER 713 952-1060	$100	No	Blend of technical and fundamental

*Software only; additional fees for dialup data

PORTFOLIO MANAGEMENT

Program	Cost*	Demo?	Comments
EQUALIZER 415 627-7000	$99	No	Executes trades via Charles Schwab
MARKET MANAGER PLUS 609 520-4642	$299	Yes	Access to Dow Jones data bases
PFROI 206 747-5598	$29	Yes	"Shareware" program a good value
PORTFOLIO EVALUATOR 414 961-1991	$129	Yes	Also does quantitative valuations
PULSE 801 265-8886	$349	Yes	Unique calendar for monthly events

*Software only

DATA BW

Potables

WINE THAT LETS YOU KEEP YOUR HEAD

NO-ALCOHOL WINE: FOR MOTHERS-TO-BE—OR AT WORKDAY LUNCHES

Like other baby boomers joining the swelling ranks of the newly pregnant, I've had to forgo some of life's simple pleasures. Fortunately, savoring a glass of wine is not one of them—thanks to the merrily sober vintners at St. Regis and Ariél Vineyards.

These California wineries make dealcoholized wine, aimed at the same consumers who drink nonalcoholic beer. Although early attempts to remove all but a tiny fraction of alcohol from wine through cold filtration took place in the 1980s, only recently have the results been anything but gruesome. No one will mistake this faux wine for Château Margaux. But some of today's varieties are supple and surprisingly drinkable.

I found the fruitier wines, such as Ariél's white zinfandel and St. Regis' rosé, remarkably like their alcoholic cousins. They retain the aromatic character and taste. Also good: sparkling wines, which mimic champagne's bubbly effervescence without its intoxicating kick. Much less successful are the chardonnays and cabernets. Despite vintage designations and fancy "reserve" labels, most are dull, soulless pretenders.

Dealcoholized wine has another selling point: It's low in calories. Imitation bubbly, for example, has only 36 calories a glass, vs. 110 for real champagne. But don't confuse nonalcoholic wines with diet wines, which have more than just a trace of alcohol.

CALL OF THE MILD. Who's drinking dealcoholized wine? In addition to expectant mothers and people who choose not to drink for health or diet reasons, there are New Age teetotalers, whose lifestyle ma rule out alcohol, and thos whose work requires them t restrict their drinking, suc as pilots. Women are the bi gest buyers, accounting f as much as 75% of sales.

With its 12 varieties Napa Valley wines, Ariél going after the high end the market. A bottle of whit zinfandel sells for $6, the r serve cabernet for $15, and premium champagne for $2 St. Regis aims a bit lower, e chewing corks and artsy l bels. It sells nonalcoholic t ble wines, champagne, an varietals for $3 to $8.

As no-alcohol vino gain converts, restaurants are b ginning to heed the call of th mild. Zola's, a popular Sa Francisco establishment, no offers dealcoholized wine b the glass, and others are ad ing it to their lists. Zola owner, Larry Bain, says h still prefers "the real stuff. But for sometime teetotaler like me, it's nice to know yo can clink glasses with fello revelers and still rise clea eyed and virtuous the nex morning. *Maria Rec*

Smart Money

BULLISH ON LATIN AMERICAN *BOLSAS*

A few years ago, only the foolhardy could be persuaded to put money into Latin America. In fact, over the past two decades, some $300 billion has fled the troubled region in search of safer havens around the globe. But now, the money is coming back in a big way.

From the Rio Grande to Tierra del Fuego, one country after another is slashing deficits, privatizing industries, and opening borders to free trade. As a result, Latin America's *bolsas* are taking off. The Buenos Aires market is up 335% in dollar terms this year, while Mexico's has gained 110%.

Amid such heady growth, more than a dozen new American depositary receipts (ADRs) and closed- and open-end mutual funds have made their debut in the U. S. recently. ADRs, which trade on the New York, American, and over-the-counter exchanges, represent ownership of shares in a foreign company. A U. S. bank holds the actual stock and converts the dividends into dollars.

Among the most active ADRs are ones from the formerly state-owned Mexican and Chilean telephone systems. Douglas Campbell, whose Santa Monica (Calif.) brokerage follows Latin stocks, especially likes Teléfonos de Mexico. At $42, its ADR is up 80% since June. But its price-earnings ratio of 10 is still about the same as AT&T's. With the U. S. and Mexico mulling a free-trade deal, Campbell also is high on Tolmex, a leading cement maker and exporter.

Instead of individual issues, some pros recommend funds targeting a country or region. Merrill Lynch (800 637-3863) and G. T. Capital Management (800 548-9995) have each unveiled open-end Latin funds recently. And the Argentina Fund, a closed-end fund sold through brokers, was launched in October and is now trading at 30% over its net asset value. But Smith Barney's Michael Porter favors the Mexico Equity & Income Fund, a closed-ender that holds stocks and high-yield bonds. He also thinks the Brazil Fund is "a great buy" at its current price of $13.50, even though a political logjam has stalled economic reforms.

Of course, some thought the fund was a great buy in September, when it was at a record-high $18. The lesson is that mood swings still can make the region's *bolsas* rise or fall 10% in a day. But for anyone willing to go for the long haul, Latin America's economic rebirth still could turn out to be the surprise of the decade. *Bill Glasgall*

GROWTH STOCKS SOUTH OF THE BORDER

Company	Industry	Price per ADR
CIFRA Mexico	Retailing	$1.28
COMPANIA DE TELEFONOS DE CHILE	Phones	41.38
SIVENSA Venezuela	Steel	7.75
TELEFONOS DE MEXICO	Phones	42.00
TOLMEX Mexico	Cement	56.25

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Fitness

GYM-DANDY WORKOUTS WITHOUT LEAVING THE HOUSE

That autumnal chill in the air is a reminder to fitness fanatics that soon they'll have to augment their regimen of running, biking, and other outdoor pursuits with a little in-house exercise.

No sweat. Advances in biomechanical design have produced versatile, compact home-exercise machines that make a 30-minute home workout just as thorough as a trip to the health club—and you don't have to pack a bag or fight over lockers. "Home-exercise people just won't settle for second-rate stuff anymore," says Michael Hoffman, a spokesperson for Life Fitness, which manufactures both home and institutional equipment.

Favorites this season are fitness climbers, or stair-steppers. Vertical towers with 'steps' force the legs to move up and down, providing a brisk cardiovascular workout. Climbers are also helpful in strength training and for toning hips, thighs, and calves. FlexStep by Spirit ($349) has steel linkages that eliminate the nylon ropes and pulleys of most models. Another good bet is the Lifestep 5500 by Life Fitness ($2,398), a more rugged motorized model with loads of electronic gadgetry and an elapsed-time readout.

SMOOTHER CLIMB. The big new thing in climbers is the addition of movable mechanical arms designed to give exercisers an upper-body workout while they're huffing up the stairway. The Spirit FlexStep 766 ($469) has a digital gauge that monitors repetitions and calories burned. Precor's new 725e climber ($625) boasts of a "torselastic spring system" that reduces the possibility of stress injuries by eliminating the jarring bounce of other climbers.

FLEXSTEP EXERCISES THE UPPER BODY, TOO

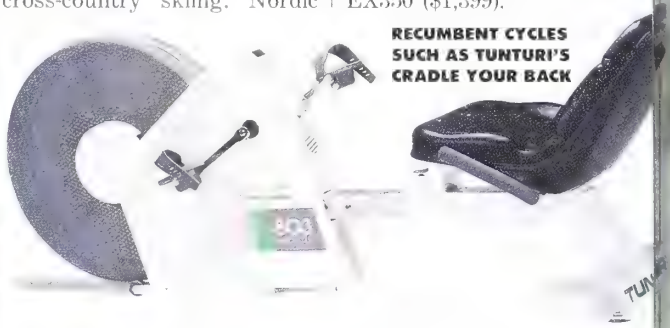
And those old standbys, exercise bicycles, are still popular. Some glitzy new models, such as Life Fitness' Lifecycle ($1,198), offer computerized cruising and electronic controls that simulate rides over varying terrain. The Lifecycle is programmed for interval training—brief but intense "uphill" sprints and periodic cooldowns. Easy riders may favor recumbent bikes. These recliners distribute weight evenly over the lower back and buttocks, so your heart doesn't have to fight as hard to pump blood and oxygen to the legs. The Tunturi E803 Aircycle ($699) lets you pedal away in comfort, cradled by a cushy seat.

HOIST'S PRICEY HOME GYM PROVIDES A SERIOUS TOTAL-BODY WORKOUT

A few years back, mechanical rowers were the rage. This year, ski machines are popular, with most striving to simulate the aerobic glide of cross-country skiing. Nordic Track makes several attractive models, priced from $299 to $1,399. For downhillers, Scientific Sports Systems' Skier's Edge ($595) and Tunturi's S530 ($699) allow you to simulate the knee-flexing and turning motion of alpine skiing. These machines can help rehabilitate damaged knees.

If you have to worry about joint stress, treadmills provide simple, low-impact aerobic workouts with virtually no chance of injury. The models in the Spirit SR series, which range from $1,695 to $2,195, offer an adjustable incline that can add to training intensity. Precor's 905 ($2,100) also inclines. It features a welded aluminum frame and cushioned running bed to reduce shock.

For those who want a serious all-body workout, there's still no substitute for home gyms. Among the best: Hoist Fitness Systems' classic 1000se ($2,595). It has equipment for a bench press, shoulder press, leg press, triceps push-down, and vertical knee raise, among other features. Parabody also makes two excellent models, the EX500 ($2,199) and the more compact EX350 ($1,399).



RECUMBENT CYCLES SUCH AS TUNTURI'S CRADLE YOUR BACK

Ultimately, the home equipment you buy will depend on your outdoor-training preferences, the depth of your pockets, and the amount of room you can spare. Just make sure to put the gear somewhere comfortable and accessible. Stashing a home gym in a chilly basement is a good way to ensure that it'll end up gathering dust. *Jane Todar*

Worth Noting

■ **BACK TO SCHOOL.** The *Directory of Executive MBA Programs* ($10) gives admission requirements and class descriptions for executive tracks at 109 B-schools. Write to the Executive MBA Council at the University of Illinois, 218 Commerce West, 1206 S. Sixth St., Champaign, Ill. 61820.

■ **SCAM SCAN.** For investors in commodity futures, the National Futures Assn. provides a free background check on firms and people in the industry (800 676-4632).

■ **PLANET WISE.** *Eco-Vacations* by Evelyn Kaye describes trips offered by groups that help wildlife or the environment. The 248-page illustrated paperback costs $25 from Blue Penguin Publications (800 800-8147).

Indian Wells, California

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186A-CA

Are PC Users Working

You've probably seen recent press articles on "repetitive motion" injuries suffered by computer users. The problem is significant. Workstation design and worker rest periods have already been regulated in San Francisco; federal guidelines will follow.

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MouseMan™ – uniquely ergonomic right-handed design

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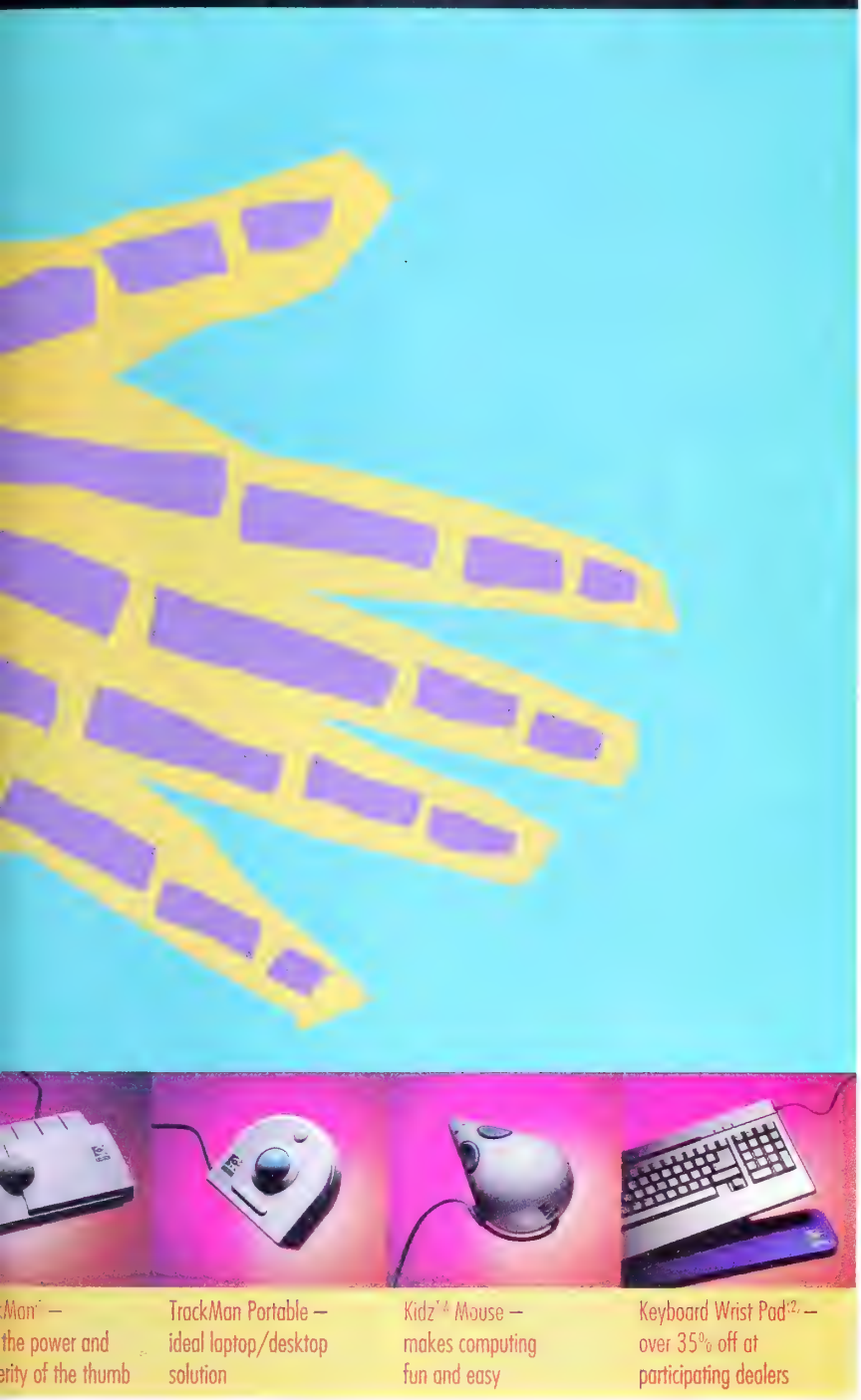
First™ Mouse – a comfortable mou at a comfortable p

1 Based on research by World Health Org., US Dept. of Health and Human Services, Logitech, and others; included in backgrounder referenced above.

Fingers To The Bone?



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Available for IBM® compatible personal computers, Macs,® and Sun™ workstations, each mouse carries a lifetime warranty and software compatibility guarantee. Try them where you see our hands-on dealer display. Corporate buyers might also want to read our detailed backgrounder on the subject – *Computing Ergonomics*. For a copy, or the location of your local dealer, call 800 231-7717 ext. 480.

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We'd like to think they can taste the extra money we spend on hearty fresh meals and complimentary regional wines. That the additional legroom on most of our flights makes them a bit more comfortable. And, that our passengers sense Alaska's special commitment to on-time arrivals, dependable baggage and hassle-free reservations.

Most of all, we want to believe that the awards we've been collecting are principally due to how we treat our customers. That anyone who occupies a seat on one of our planes receives the same genuine hospitality, flight after flight after flight.

If all this sounds like your kind of airline, we suggest you conduct your own on-board survey soon. Just call your travel agent or Alaska Airlines at 1-800-426-0333.

We'll show you that a little monotony can be downright memorable.

Alaska Airlines

186D-CA

ndex to Companies

is index gives the starting page for a story or fea-re with a significant reference to a company. Most bsidiaries are indexed under their own names. ompanies listed only in tables are not included.

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11	Gulf Oil
12	Atlantic Richfield
13	Shell Oil
14	Occidental Petroleum
15	U.S. Steel
16	Phillips Petroleum
17	Sun

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THERE WHEN IT COUNTS.

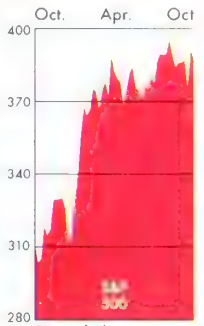
Continental Insurance®

nvestment Figures of the Week

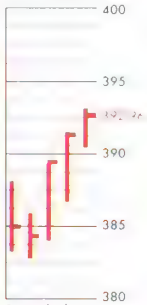
MMENTARY

appointed with the pace of the overy, the Federal Reserve ened up the monetary tap yet ain. Yields on three-month asury bills fell below 5%. Long-m bonds rallied, too, with yields pping below 8%. Though the ggish state of the economy dims outlook for profits, stock mar-investors decided that lower in-est rates were enough reason to ly. The Dow industrials are a ir's breadth below the old high; S&P 500, a tad above it.

STOCKS

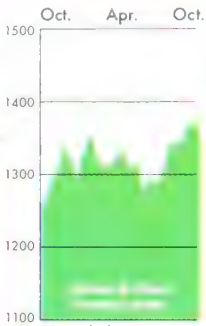


52-week change **+29.3%**



1-week change **+1.3%**

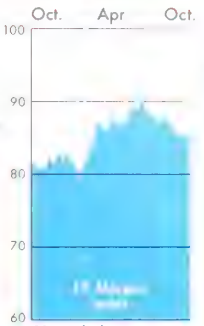
BONDS



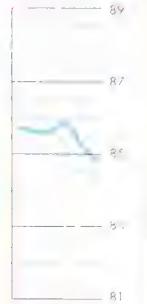
52-week change **+8.5%**

1-week change **+1.6%**

THE DOLLAR



52-week change **+3.7%**



1-week change **−1.0%**

MARKET ANALYSIS

S. STOCKS	Latest	% change Week	% change 52-week
W JONES INDUSTRIALS	3071.8	1.0	25.8
COMPANIES (Russell 1000)	207.1	1.3	32.2
ALL COMPANIES (Russell 2000)	183.4	0.2	54.3
COMPANIES (Russell 3000)	220.3	1.3	33.3

REIGN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
NDON (FINANCIAL TIMES 100)	2577.1	0.6	25.7
KYO (NIKKEI INDEX)	24,981.2	0.7	−0.8
RONTO (TSE COMPOSITE)	3497.6	1.1	13.5

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.96%	5.18%	7.4%
30-YEAR TREASURY BOND YIELD	7.90%	8.08%	8.8%
S&P 500 DIVIDEND YIELD	3.14%	3.24%	4.0%
S&P 500 PRICE/EARNINGS RATIO	21.6	20.8	13.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	383.3	382.9	Positive
Stocks above 26-week moving average	52.5%	53.3%	Negative
Speculative sentiment: Put/call ratio	0.45	0.47	Positive
Insider sentiment: Vickers sell/buy ratio	2.79	2.82	Negative

NDUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

UR-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
TOYS	13.6	121.3	HASBRO	21.4	167.9	35 ½
PAPER CONTAINERS	11.4	90.1	STONE CONTAINER	22.5	140.3	23 ⅛
RAILROADS	8.8	61.7	SANTA FE PACIFIC	22.7	−8.0	11 ½
GOLD MINING	7.4	−7.2	NEWMONT MINING	9.2	15.7	41 ¼
MEDICAL PRODUCTS AND SUPPLIES	6.8	56.3	BIOMET	14.0	208.1	42 ¾
UR-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
HOSPITAL MANAGEMENT	−15.1	−11.1	NATIONAL MEDICAL ENTERPRISES	−23.8	−7.1	16 ⅜
DEPARTMENT STORES	−10.3	42.1	NORDSTROM	−23.3	65.3	34 ½
MACHINE TOOLS	−8.3	1.1	CINCINNATI MILACRON	11.9	−8.6	9 ¼
BUILDING MATERIALS	−7.6	47.5	OWENS-CORNING FIBERGLAS	−38.1	49.1	20 ⅞
REAL ESTATE INVESTMENT TRUSTS	−7.5	−0.5	LOMAS & NETTLETON MORTGAGE	−23.5	−38.1	1 ⅝

MUTUAL FUNDS

MORNINGSTAR INC

ADERS

r-week total return	%
EQUITY STRATEGIES	15.7
UNITED SERVICES WORLD GOLD	13.0
BENHAM GOLD EQUITIES INDEX	10.9

-week total return	%
OPPENHEIMER GLOBAL BIO-TECH	135.6
OBERWEIS EMERGING GROWTH	102.3
FINANCIAL STRATEGIC HEALTH SCIENCES	100.4

LAGGARDS

Four-week total return	%
G. T. AMERICA GROWTH	−5.8
OPPENHEIMER GLOBAL ENVIRONMENT	−5.2
AFUTURE	−5.0

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−16.6
USF&G EUROPEAN EMERGING COMPANIES	−15.4
STRATEGIC INVESTMENTS	−14.0

RELATIVE PORTFOLIOS

DATA RESOURCES INC

llar amounts present the present lue of $10,000 vested one year ago each portfolio

rcentages indicate e-day total returns

U. S. stocks	Treasury bonds	Foreign stocks	Money market fund	[illegible]
$13,299	**$11,895**	**$11,021**	**$10,555**	**[illegible]**
+0.94%	+2.03%	−0.52%	+0.10%	[illegible]

data on this page are as of market close Wednesday, October 30, 1991, unless otherwise indicated ustry groups include S&P 500 companies only; performance and share prices are as of market close October 29. Mutual fund returns are as of October 25. Relative portfolios c [illegible] as of October 29. A more detailed explanation of this page is available on request

THE REAL WORTH OF 'VALUE MARKETING'

Value: A fair return or equivalent in goods, services, or money for something exchanged.

Just about everyone knows the meaning of "value," though you'd never know it from the excesses of the Eighties. Clever campaigns often allowed marketers to charge more for their products and reap ever-higher profits. It worked like a dream—until suddenly, facing difficult economic times, consumers woke up.

Now, to the extent that they're buying, many consumers are choosing the car that delivers the most for the money—not necessarily the one they coveted as a status symbol a few years ago. They're shifting to the toothpaste that works from the ones with the slickest promotions. Companies that understand this new consumer have come up with something new: "value marketing" (page 132).

A word of caution is necessary. In marketing, watchwords quickly metamorphose into buzzwords—and value is no exception. We're not talking about ads that merely boast of a product's value or even such legitimate sales tools as price cuts and discounting. Used correctly, value marketing amounts to much more than just slashing prices or distributing coupons. It means giving the customer an improved product, with added features and enhanced service—all at a better price. And that means changing the role of marketing itself.

In value marketing, marketing becomes part of the system for delivering value to the consumer. Instead of merely shaping image, such a program might offer enhanced guarantees or longer warranties, ads that educate rather than hype, membership clubs that build loyalty, frequent-buyer plans, improved communications with customers through 800 numbers, or package design that makes the product easier to use or more environmentally friendly.

These and other value-marketing techniques can be expensive. They can mean added production and marketing costs added to lower unit prices. Even so, the principles involved in value marketing—value for money, an improved product, enhanced service, and added features—are just what U. S. business needs to enhance its competitiveness in the global marketplace. That's why it will be all to the good if the commonsensical virtues of value marketing become part of the permanent strategy of U. S. business.

GO EAST, AMERICAN BUSINESS—TO ASIA

Americans need to pay more attention to booming East Asia. For a half-decade, the U. S. has been transfixed by the upheaval in the Soviet Union and the spectacle of communism's worldwide collapse. That vast event has overshadowed the emergence of a new economic powerhouse on the Pacific's western rim, from Korea to Thailand (page 56). Now, we are confronted by the need fo a revolutionary shift in our priorities: Our preoccupatio with Europe must give way to a new appreciation of the im portance of the Pacific rim.

The U. S. helped launch this economic phenomenon b opening its own market to Asian exports and shoring u East Asia's regional stability with a combination of America military strength and diplomacy. But now, the U. S. wi risk being left behind economically if it fails to keep it economy closely linked to the new Asian dynamo. To do so the U. S. must continue to use its bargaining leverage—a the prime market for East Asia's products—to insist tha Asians open their markets to American goods and services And U. S. business must match the strategic vision of it Japanese competitors by laying solid foundations now for fu ture market shares in this booming region.

With the winding down of the cold war, industrial prowes seems certain to become, more and more, the basis for po litical as well as economic influence. America's own eco nomic strengths, its clout as a Pacific power, and its long tie with East Asia seem to destine this country to play a ke role in the Pacific Century. U. S. business should seize th opportunity.

TWO BREAKTHROUGHS FOR CIVIL RIGHTS

In his lonely struggle to keep the Civil Rights Act of 199 alive in the face of seemingly hopeless odds, Senato John C. Danforth (R-Mo.) has done the nation a service Ironically, it took the dual ugliness of the Clarence Thoma confirmation hearings and ex-Klansman David Duke's victory in a Louisiana gubernatorial primary to end the partisa wrangling over the measure.

After Duke embarrassed the Administration by winning the GOP nomination, President Bush seems to have decided to wash his hands of the politics of race. The affirmative-action provisions in the "compromise" bill that Bush endorsed on Oct. 23 differ little from the language that Bush has been denouncing for months as a "quota bill."

The Thomas hearings are responsible for the second civil rights breakthrough: a provision in the act giving the victims of sexual harassment the right to sue an employer for monetary damages. Under current law, all workers who win a harassment case can collect is back pay and reinstatement in a job they probably wouldn't want. The draft legislation would provide for damages of $50,000 to $300,000, depending on the size of the company.

It's sad that such a worthy bill, which enjoys broad bipartisan support, is the unintended consequence of such distasteful and divisive events. But now, it will be easier for victims of job discrimination to win their cases without imposing an undue burden on employers. And victims of on-the-job sexual harassment will have a chance at real justice. The Senate also deserves congratulations for adding a long-overdue provision: For the first time, the Senate would extend protections against discrimination and sexual harassment to the 30,000 employees of Congress.

November 18

RPORATE PROFITS OF 900 COMPANIES

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BusinessWeek

MBER 18, 1991 A McGRAW-HILL PUBLICATION $2.50

HONDA

S IT AN AMERICAN CAR?

Most Hondas sold in America are made in America. But where do their parts really come from? The answer may well influence U.S. and European trade policy, Japanese investment, and even the pending free-trade pact with Mexico.

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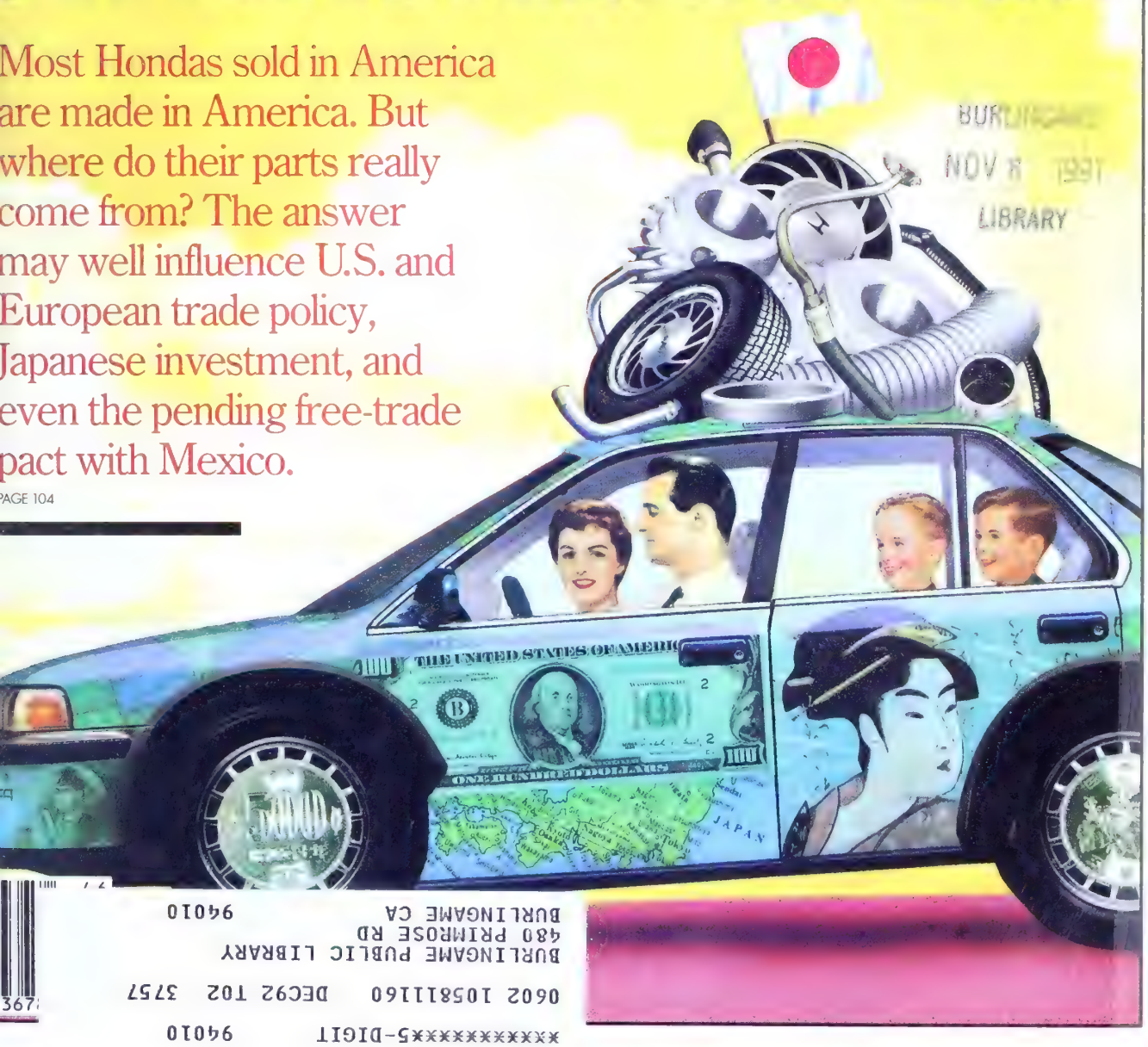

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FUJITSU

COMPUTERS, COMMUNICATIONS, MICROELECTRONICS

NUMBER 3240

BusinessWeek

NOVEMBER 18, 1991

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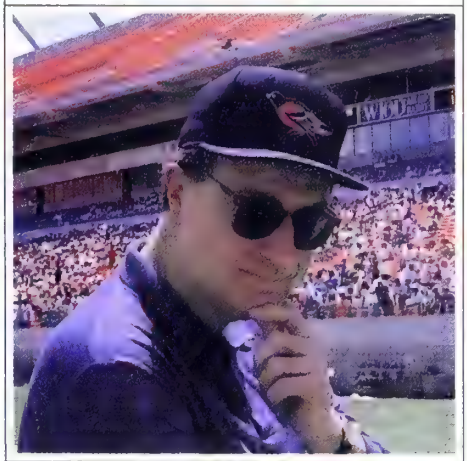

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Free the banks—and free taxpayers

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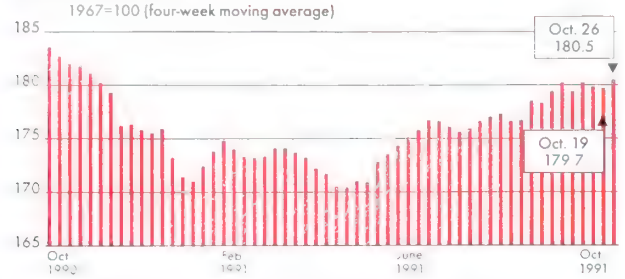
BusinessWeek Index

PRODUCTION

Change from last week: 0.4%
Change from last year: −0.8%

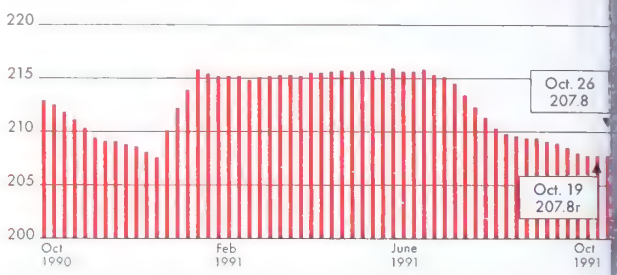


The production index increased modestly during the week ended Oct. 26. On a seasonally adjusted basis, auto and truck production was down sharply as companies cut output in response to lukewarm sales. Crude-oil refining and lumber output also fell. Production of electric power, steel, coal, paper, and paperboard and rail-freight traffic increased. Before calculation of the four-week moving average, the index was unchanged from 181 in the prior week.

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: 0.0%
Change from last year: −1.6%



The leading index was unchanged during the week ended Oct. 26. Bond yields for the week jumped higher as talk of tax cuts in Washington roiled the bond markets. In addition, lower stock prices, declining materials prices, and slower growth in real estate loans offset faster growth in M2. Data on business failures were unavailable. Before calculation of the four-week moving average, the index fell to 207.9, from 208.5 in the previous week.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/2) thous. of net tons	1,795	1,778#	−4.2
AUTOS (11/2) units	128,178	138,013r#	−8.9
TRUCKS (11/2) units	89,595	85,154r#	0.2
ELECTRIC POWER (11/2) millions of kilowatt-hours	53,059	52,504#	4.2
CRUDE-OIL REFINING (11/2) thous. of bbl./day	12,774	12,698#	−1.3
COAL (10/26) thous. of net tons	20,361#	19,911	−5.3
PAPERBOARD (10/26) thous. of tons	798.3#	783.5r	7.6
PAPER (10/26) thous. of tons	777.0#	754.0r	−0.1
LUMBER (10/26) millions of ft	498.1#	507.6	8.4
RAIL FREIGHT (10/26) billions of ton-miles	21.8#	21.4	0.9

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (11/6)	130	131	130
GERMAN MARK (11/6)	1.64	1.68	1.49
BRITISH POUND (11/6)	1.77	1.74	1.97
FRENCH FRANC (11/6)	5.61	5.73	5.01
CANADIAN DOLLAR (11/6)	1.12	1.12	1.17
SWISS FRANC (11/6)	1.45	1.47	1.25
MEXICAN PESO (11/6)	3,060	3,056	2,924

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (11/6) $/troy oz	354.500	359.350	−10.3
STEEL SCRAP (11/5) #1 heavy, $/ton	94.00	97.00	−12.1
FOODSTUFFS (11/4) index, 1967=100	205.6	207.0	−2.6
COPPER (11/2) ¢/lb.	111.6	110.6	−8.5
ALUMINUM (11/2) ¢/lb	53.5	55.1	−33.1
WHEAT (11/2) #2 hard, $/bu	3.78	3.77	35.0
COTTON (11/2) strict low middling 1-1/16 in., ¢/lb.	57.16	57.90	−20.2

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, Metals Week, Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (11/1) S&P 500	392.55	387.05	28.
CORPORATE BOND YIELD, Aaa (11/1)	8.58%	8.63%	9.
INDUSTRIAL MATERIALS PRICES (11/1)	95.6	95.9	−9.
BUSINESS FAILURES (10/25)	NA	409	N
REAL ESTATE LOANS (10/23) billions	$395.9	$396.3	2.
MONEY SUPPLY, M2 (10/21) billions	$3,408.4	$3,400.1r	2.
INITIAL CLAIMS, UNEMPLOYMENT (10/19) thous.	405	452	−10.

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
EMPLOYMENT, CIVILIAN (Oct.) millions	117.0	117.2	−0.
UNEMPLOYMENT RATE, CIVILIAN (Oct.)	6.8%	6.7%	19
12 LEADING INDICATORS COMPOSITE (Sept.) index	145.4	145.5r	1.
CONSTR. SPENDING (Sept.) annual rate, billions	$406.5	$402.1r	−7.

Sources: BLS, Commerce Dept., Census Bureau

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (10/21)	$882.6	$873.0	7.
BANKS' BUSINESS LOANS (10/23)	296.7	299.5r	−8.
FREE RESERVES (10/30)	963	742r	245.
NONFINANCIAL COMMERCIAL PAPER (10/23)	134.6	136.4	−13

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (11/5)	5.06%	5.11%	7.97[3]
PRIME (11/6)	7.50	8.00	10.00
COMMERCIAL PAPER 3-MONTH (11/5)	5.06	5.31	7.87
CERTIFICATES OF DEPOSIT 3-MONTH (11/6)	4.98	5.26	7.98
EURODOLLAR 3-MONTH (11/2)	5.25	5.35	7.93

Sources: Federal Reserve Board, First Boston

#=Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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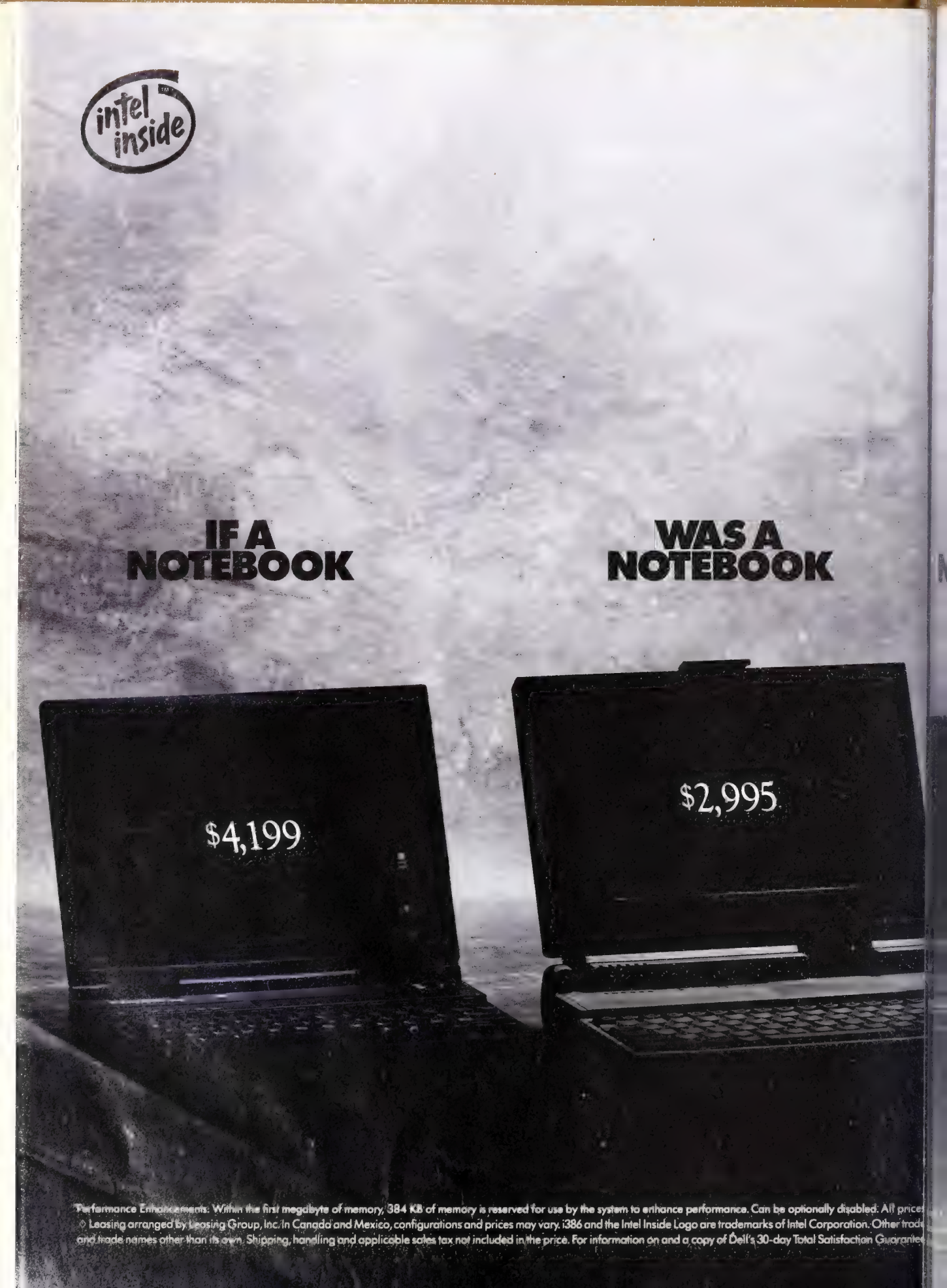
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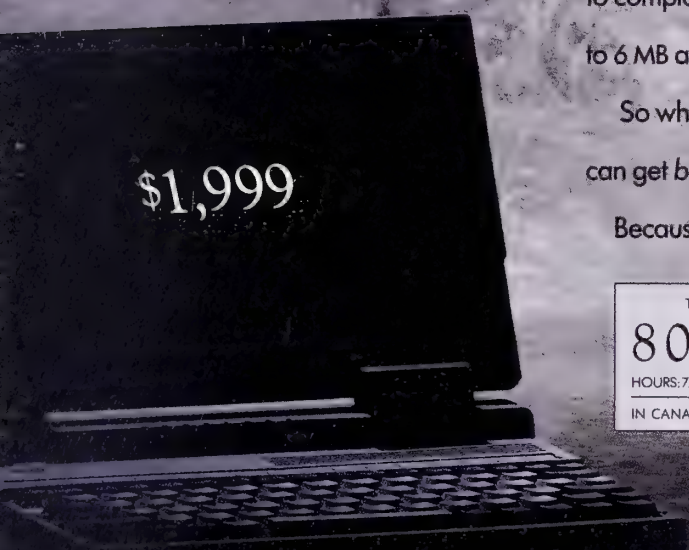

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Readers Report

SOME REACTIONS TO BUSINESS WEEK'S HEALTH PLAN

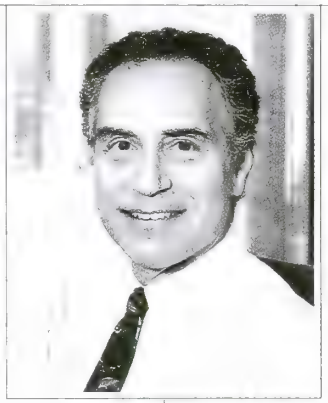
Many of us in Rochester, N.Y., found your proposal for health care to be particularly interesting because it closely resembles our community's very successful regional health care system ("A prescription for reform," Social Issues, Oct. 7). In particular, the role you describe for a health care purchasing corporation has been performed effectively by Blue Cross & Blue Shield of the Rochester area for years.

For example: With a market share of about 73%, Blue Cross & Blue Shield is able to negotiate favorable rates with local providers on behalf of all of its members. More than 90% of health insurance policies are community rat[ed], which means that the corner gas stati[on] owner pays the same premium rate [as] Eastman Kodak.

More than 50% of Rochester-area re[si]dents are enrolled in health maintenan[ce] organizations that employ the "ga[te]keeper" concept of managed care. Bl[ue] Cross & Blue Shield provides case ma[n]agement services, directs subscribers [to] "centers of excellence," and works clo[se]ly with local providers to establish qu[al]ity standards, training programs, pe[er] review activities, and clinical guideli[nes] on treatments.

This approach has been effective. F[or] example, local health insurance cos[ts] per-employee in 1990 averaged $2,0[00] compared with a national average [of] $3,217. Our rate of uninsured is estim[ated]

ANTHONY J. PARISI, 1943-1991



Last month, the presses rolled on a bonus issue of BUSINESS WEEK entitled The Quality Imperative. Listed on the table of contents as special issue editor was Anthony J. Parisi, since 1985 an assistant managing editor of the magazine.

It was Tony Parisi's last assignment: On Oct. 30, at the age of 48, he died in his Manhattan home of metastatic melanoma, a fast-spreading skin cancer.

Quality was an appropriate subject for Parisi to tackle: To his friends and colleagues, he was quality all the way. Born in Jersey City, N.J., he attended St. Peter's Prep and graduated from Stevens Institute of Technology with a bachelor's degree in engineering. In 1967, he joined an editorial-training program at McGraw-Hill Inc., BUSINESS WEEK's parent, and went from there to the staff of *Product Engineering*, then a McGraw-Hill publication.

In 1971, he transferred to BUSINESS WEEK and, shortly after the first Arab oil embargo, became the magazine's first energy editor. In that post, he wrote many distinguished stories and w[on] the 1977 University of Missouri Business Jo[ur]nalism Award for a co[ver] story on energy conservation—an issue which he remained vo[ca]l almost to the last.

In the same ye[ar] Parisi moved to *The New York Times* as ener[gy] correspondent and th[ree] years later to London as bureau chief for *Petroleum Intelligence Weekly*. He returned to BUSINESS WEEK as a senior editor in 1983 and was promoted to assistant managing editor in 1985.

In recent years, he guided our coverage of information processing, science and technology, and industries, among other things, and presided over two mammoth special issues on innovation as well as helping to conceive and plan this year's quality package. Week by week out, he was a vigorous editor and sought-after adviser on all manner of editorial challenges, often far beyond his assigned territory, and he met them all with skill, dignity—and a smile. He has left too soon.

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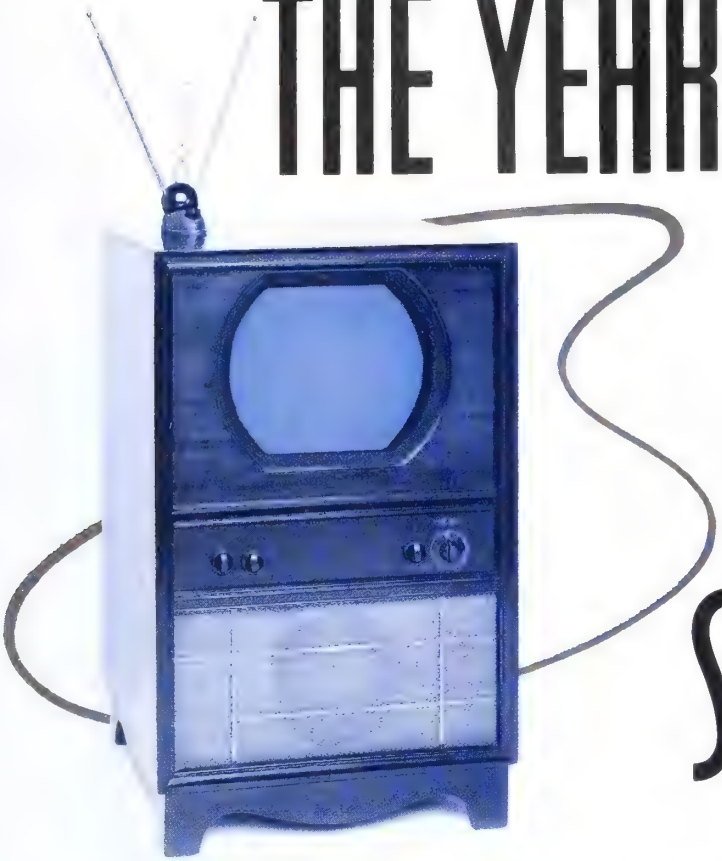
THE YEAR MY FIRM STOPPED SWITCHING INSURANCE COMPANIES



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NEW AUDI 100 HAS GERMAN MOTORING PRESS DOING A 180°.

In a surprise turnaround, three of Germany's top automotive journals rated the all new Audi 100 ahead of Mercedes and BMW. As Andres Borchman, editor of AUTO BILD, said, "The new Audi 100 is no longer number three among the distinguished German marques, but, as the test proves, number one."

Even though the Audi outperformed the $42,950 Mercedes and the $35,625 BMW, the front-wheel drive Audi 100S is priced at $29,900.* And features a V-6 engine, ABS brakes, driver's side airbag, fully galvanized body, and a 3-year or 50,000-mile limited warranty with no charge for scheduled maintenance.**

—Karl Treutler, Munich

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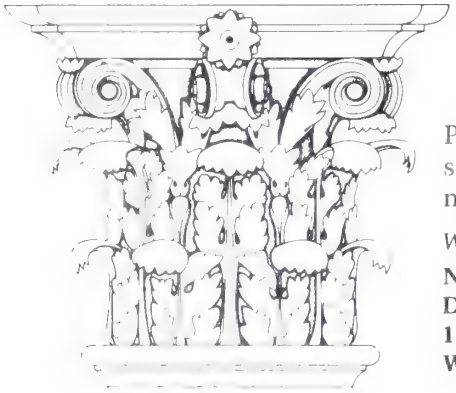

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Readers Report

ed to be about 8.5%, well below the n tional average. We also outperform th nation in hospital admissions, hospit days, and average lengths of stay.

Raymond A. Savag
Senior Vice-Preside
Blue Cross & Blue Shield Ass
Rochester, N.

You assert that "no one is arguin that technological innovation shou slow down." Unfortunately, that's n the case. Slowing down innovation is e actly what some voices in the heal care debate are urging.

But this focus on innovation is m placed, for the real technology issue r lates to its utilization. The purcha price of all device technologies you c think of together add up to about 5% U. S. health care costs, while utilizati of these technologies constitutes an where from 10% to 40% of the increa in health care expenditures.

How we define the problem of risi health care costs may well determi how we fix it. Those who blame th fruits of innovation—that is, health ca technology—for the sins of utilizatio will never fix the incentives in our sy tem that lead to overuse and wast They will only stop the medical innov tions that offer patients longer, mo productive, and higher quality lives.

Alan H. Magazine, Preside
Health Industry Manufacturers Ass
Washingt

The article offers a solution to th health care crisis without getting the root of the problem. Two-thirds medical expenditures are now controll by government, yet government intr sion was largely ignored as a cause this mess. The solution is simple but r quires major surgery: eliminate gover ment intervention, let the consum make the decisions, and give the fr market a chance to work its magic.

Kevin Duf
Houst

Your outline for a future medic care system for the U. S. is we thought-out and comprehensive.

As you pointed out, waste in the fie of medicine is rampant, with estimat of 30% more diagnostic tests and proc dures than we really need. Many these resources are spent in the fin months of life and in sustaining prem ture infants. In many cases, procedur are performed out of fear and ignoran on the part of the doctor—fear of poss ble lawsuit and peer pressure and ign rance of benefit vs. cost.

In the medical marketplace today, p tients and their families expect mor

We look for things you might otherwise miss

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Business support is at the core of the Industrial Bank of Japan's global corporate banking. IBJ takes the time to get a deeper understanding of each market and creates original, individualized products through long and close relationships with clients—strategic assistance to build a firmer foundation for new or existing ventures, or get an important head start in growth.

IBJ's world-class research and analysis stems from the enormous wealth of information available to IBJ on request through its close relationships with Japanese corporations, from active participation on many governmental committees, and from IBJ's well-established global network.

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IBJ is in close touch with an extensive client list covering over 90% of Japan's top 200 companies. The bank's strong relationships in all sectors of Japanese industry reflect its neutral and unbiased position with respect to Japan's corporate alignments.

IBJ was rated highest in overall banking service in a Nihon Keizai Newspaper poll of 1,825 publicly traded Japanese firms, and has been ranked number one every year since the poll's inception. The Wall Street Journal named IBJ one of the 12 top banks to lead the financial world through the year 2000.

And in market capitalization, perhaps the most demanding poll of all, IBJ stood at US$60,893 million on March 31, 1991, placing it first among world banking institutions.

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Combining product and relationship banking on a global scale, IBJ serves the international corporate community with a full spectrum of corporate banking services based on a strong sense of commitment to all its customers.

With 14 branches, 18 representative offices, and 16 major subsidiaries overseas—locations across Europe, the Americas, Asia and Oceania—IBJ is applying its full power and resources as one of the ten largest banks in the world ($320 billion in assets), providing customers with information and fresh ideas.

With corporate activities becoming increasingly borderless, IBJ has offered a variety of seminars to representatives of governments, financial institutions and corporations from around the world, in its Industrial Finance Seminar (IFS) program.

What's best for all concerned?

IBJ's assistance with effective, well-planned corporate development is based on a simple principle: seeking the best for all concerned.

IBJ keeps customers' long-term interests always at heart. If a deal is priced too high, involves too great a debt load, or presents too much risk in a cyclical industry, our analysts will help them weigh the alternatives.

Securities-related services

IBJ Group is active in securities trading and investment management through subsidiaries worldwide.

IBJ Trust Company, a New York-based subsidiary, was the first Japanese subsidiary to act as placement agent for a deposit note facility.

IBJ International, Ltd., IBJ's London-based subsidiary, is a leading dealer in the Eurobond market and is the number-one lead manager of yen-denominated Eurobonds among Japanese overseas banking subsidiaries; the first such subsidiary chosen to lead-manage yen-denominated Eurobond issues for the World Bank and Asia Development Bank.

Other IBJ subsidiaries are active throughout Europe's financial centers, as well as major Asia-Pacific markets. IBJ Group underwrote 174 of the 526 bond issues which Japanese corporations raised overseas in 1990.

A transnational financial institution

IBJ is helping corporations arrive at appropriate strategies for their specific objectives throughout the world: everything from innovative financing to investment management, mergers and acquisitions, project financing and leasing. IBJ can reveal greater opportunity and choice in all your business activities.

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THE NIGHTLY BUSINESS REPORT

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Readers Report

and their requests are infinite. Few in centives currently exist for the physicia to decline or moderate their demands: T the contrary, they earn more for doin more in the current system.

What is missing is the ability to forr a consensus about what tests and proc dures will be allowed: Government mar dates may be part of the solution, bu precious little thought has been given t inventing ways for physicians to kee their patients well.

Graham Bell, M. D.
Oakland, Cali

THE GED DIPLOMA: A SUBSTITUTE, MAYBE, BUT NOT SECOND-RATE

No one has ever claimed that th General Educational Developmen diploma (not the General Education De gree, as cited in your story) was "cheap substitute" for a regular hig school education ("Failing grades fo high school equivalency tests," Econom ic Trends, Oct. 7). However, for almos 50 years, the GED Tests have promote adult learning and created educationa and career opportunities for millions o Americans. As a consequence of prepar ing for the tests, many adults improv their reading, math, writing, and highe level thinking skills considerably. Ou studies show that passing the test is good indicator to employers that GE graduates possess valuable workplac skills and a level of initiative importan to success in the job market—a fact t which many of your readers will attes

The best advice for any student is t finish school. But 50 million America adults do not have a high school diplo ma, and for them the GED can improv opportunities.

Jean Lowe, Directo
General Educational Developmen
Testing Servic
American Council on Educatio
Washingto

SUPPORTING THE BELLS BUT NOT BEHOLDEN TO THEM

Your coverage of the regional Be lobbying effort implies that any o ganization supporting relief (from cou restrictions on the Bells) is automaticall beholden to the Bell companies ("Every one has taken lumps in this lobbyin war," Government, Oct. 21).

You neglected to mention the indepen dent growth of a coalition of small and medium-size manufacturers who, lik myself, find that the restriction stunt the growth of entrepreneurial companie at a time when venture capital and othe sources of critical funding have all bu dried up. This coalition—with 140 compa

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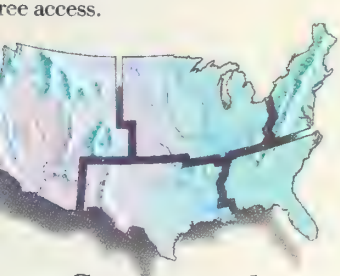

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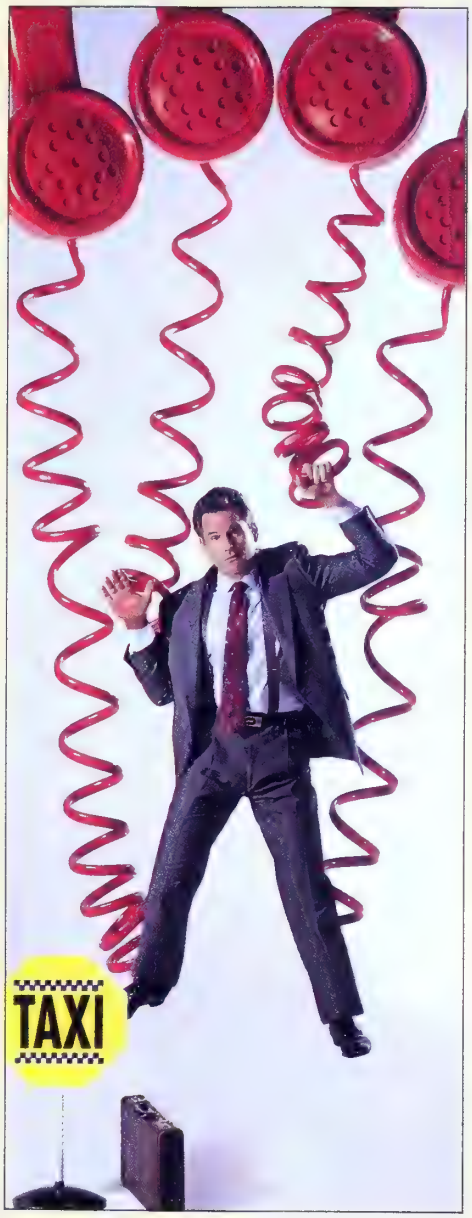

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Readers Report

nies in 40 states employing some 31,00 workers—all believe that removal of th restriction will stimulate the growth c U.S. companies and increase jobs fc American workers.

We also share one other thing—n one has taken a dime from any of th Bell companies in exchange for thei support, and there is no quid pro qu (spoken or otherwise) for those who be long to this independent coalition.

George Sollma
President & CE
Centigram Communications Cor
San Jose, Cali

THE BLADE: THERE WERE NO THREATS OF BAD PRESS

Your story included the false asser tion that as an opponent of unleash ing the Baby Bells, I threatened Ohi Representative Michael Oxley (R-Ohic with unfavorable coverage in *The* (Tole do) *Blade* in an effort to influence hi position on telecommunications issues.

Neither I nor any company with whic I am affiliated does business that way As I told your reporter before you pub lished your story, my August meetin with Representative Oxley in his Lima (Ohio) office was a friendly conversatio that dealt with substantive issues. N threats, veiled or otherwise, were mad by anyone.

Allan Block, Presiden
Blade Cablevisio
Blade Communications Inc
Toled

SPEND THE PEACE DIVIDEND WISELY—ON DEFENSE

What does your editorial write think brought the Soviet Union t its knees? Our disarmament? ("Now, le the arms cuts really begin," Editorials Oct. 14). How ridiculous to state we should now stop developing a means t defend ourselves. The advanced Stealth bomber and Strategic Defense Initiativ programs initiated by President Reaga were the key factors in bringing the So viet Union to the arms limitation negoti ations and are absolutely necessary t protect this country. It's all well and good to say we should stop spending fo arms and use the funds to improve ou lives, but first we should make sure we will have a country to improve.

C. W. Johns
San Jose, Calif

Letters to the Editor should be sent to Reader Report, Business Week, 1221 Avenue of the Ameri cas, New York, N. Y. 10020. Fax: (212) 512-4464 Telex: 12-7960, Intl. 4998204. All letters must in clude an address and daytime and evening tele phone numbers. We reserve the right to edit letter for clarity and space.

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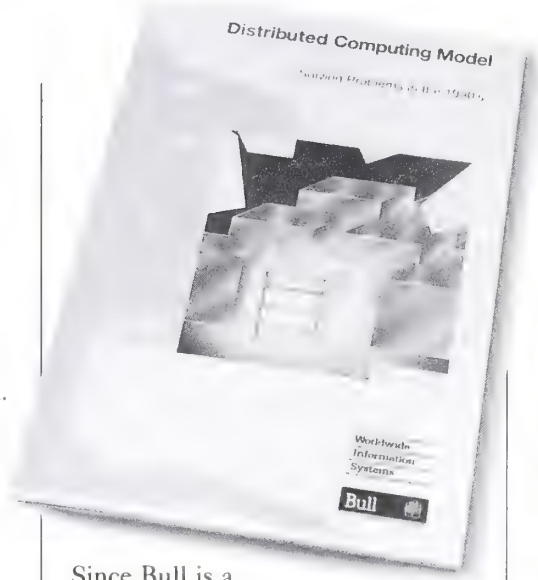

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IN SEARCH OF EXCESS: THE OVERCOMPENSATION OF AMERICAN EXECUTIVES
By Graef S. Crystal
Norton • 272pp • $19.95

HOW CEO PAYCHECKS GOT SO UNREAL

It was one of those pivotal moments in U.S. business history that go unnoticed at the time: Some 40 years ago, a young McKinsey & Co. consultant named Arch Patton completed the first study of executive pay for the American Management Assn. Little did he know that his survey and subsequent variations would be used to help justify decades of huge pay raises for CEOs.

As one executive discovered another who made more money, pay went up and up, thanks to Patton's surveys. Today, by author Graef S. Crystal's reckoning, CEOs at the largest American companies are paid 150 times more than the average U.S. worker. In Japan, by contrast, the boss gets only 17 times the pay of an ordinary worker. For American CEOs, the average paycheck is $2.8 million; for Japanese CEOs, $300,000.

Crystal, who viewed Patton as a role model, was for 18 years a compensation expert with consultant Towers Perrin. He rose to the top of the field, striding into boardrooms armed with the facts and figures to justify big runups in pay for chief executives. But in recent years, increasingly disturbed by the system he served, he "walked across the street" to become the leading critic of excessive pay. He retired in 1987 to write and consult with shareholder-rights groups.

In a new book, *In Search of Excess*, Crystal fesses up to how the game he once played works. If a company wanted to pay its executives above the going rate, he says, he generally went along—after all, it was usually the CEO who hired him. Concedes Crystal: "I helped create the phenomenon we see today: huge and surging pay for good performance, and huge and surging pay for bad performance, too . . . I acted in full realization that if I didn't please a client, I wouldn't have that client for long."

But *In Search of Excess* goes beyond confession. It's a hard-hitting analysis of what's wrong with executive pay in America. Crystal takes on all the big corporate moneymakers, from Coca-Cola Co.'s Roberto C. Goizueta to Paramount Communications Inc.'s Martin S. Davis. He reveals the tricks used to obscure how much CEOs stand to make—deciphered by reading hundreds of proxy statements detailing public companies' pay practices. He raps the knuckles of directors who load the kitty with restricted stock that pays off regardless of performance, and he decries the repricing of stock options when poor results send a company's shares into a tailspin.

Executive compensation hardly seems to lend itself to book-length treatment. But Crystal draws readers through the exotica of a proxy like an ebullient tour guide on safari. He brings a passion and understanding to his subject that make even the minutiae fascinating.

Crystal estimates that Time Warner's Steve Ross pulled down $275 million from 1973 through 1989

This is particularly true of Time Warner Inc.'s Steve Ross, whom he terms probably "the highest-paid CEO of a publicly owned company who ever lived." Crystal devotes 33 pages to Ross's income, estimating that from 1973 through 1989, Ross made about $275 million. He guides readers through a dazzling array of pay schemes: an investment partnership, restricted stock, deferred compensation, "A" and "B" bonus plans, equity plans, consulting fees, and what Crystal believes is history's largest stock option—1.8 million shares.

In fairness, Crystal acknowledges that during that period, Ross engineered a 24% compounded annual total return for shareholders. Only 17% of 407 companie in Crystal's sample did better. But eve if the company had performed modestl Crystal complains, Ross would hav made a pile.

In fact, Crystal isn't against big pa altogether: His gripe is big pay for poo or average performance. He labels Wa Disney's Michael D. Eisner, Reebok I ternational's Paul Fireman, and H. Heinz's Anthony J. O'Reilly "goo guys," even though in recent years, eac has ranked among the highest-pai CEOs. Crystal argues that each made h money honestly—by tying his pay t performance and delivering results. Bu there should be a limit to what eve successful managers earn, and thes guys have topped it. Eisner, for exam ple, made $59.5 million over the las three years. (Crystal doesn't mentio that Disney and Heinz used to emplo him as a consultant.)

As a critic, Crystal can be prone t hyperbole. Consider hi assertion that America CEOs earn 150 times mor than ordinary workers BUSINESS WEEK's analysi shows the disparity to b closer to 85 times. Wh such a difference? Crysta places a value on CE stock options that haven yet paid out. For Ros alone, that sum came t $35.8 million last yea even though his option are "under water"—th price at which he coul exercise them is highe than their current marke price.

Whether the right num ber is 85 or 150, though, i almost academic. The point is that to many chief executives exclude them selves when they talk about the need t control costs and compete globally While they lay off workers and cut pa and benefits, their own pay goes up And while many CEOs speak enviously o cheaper labor costs abroad, few woul settle for pay like that of their counter parts in other leading industrial nations

Meanwhile, the credibility gap be tween the leadership of American corpo rations and its managers and rank-and file keeps widening. What to do? Crysta says that board pay committees shoul have their own consultants with no tie to management. He also believes ac counting standards should be altered t require the cost of stock options to b charged to a company's earnings. An he urges the Securities & Exchange Commission to demand better disclosure

These prescriptions may not make fa

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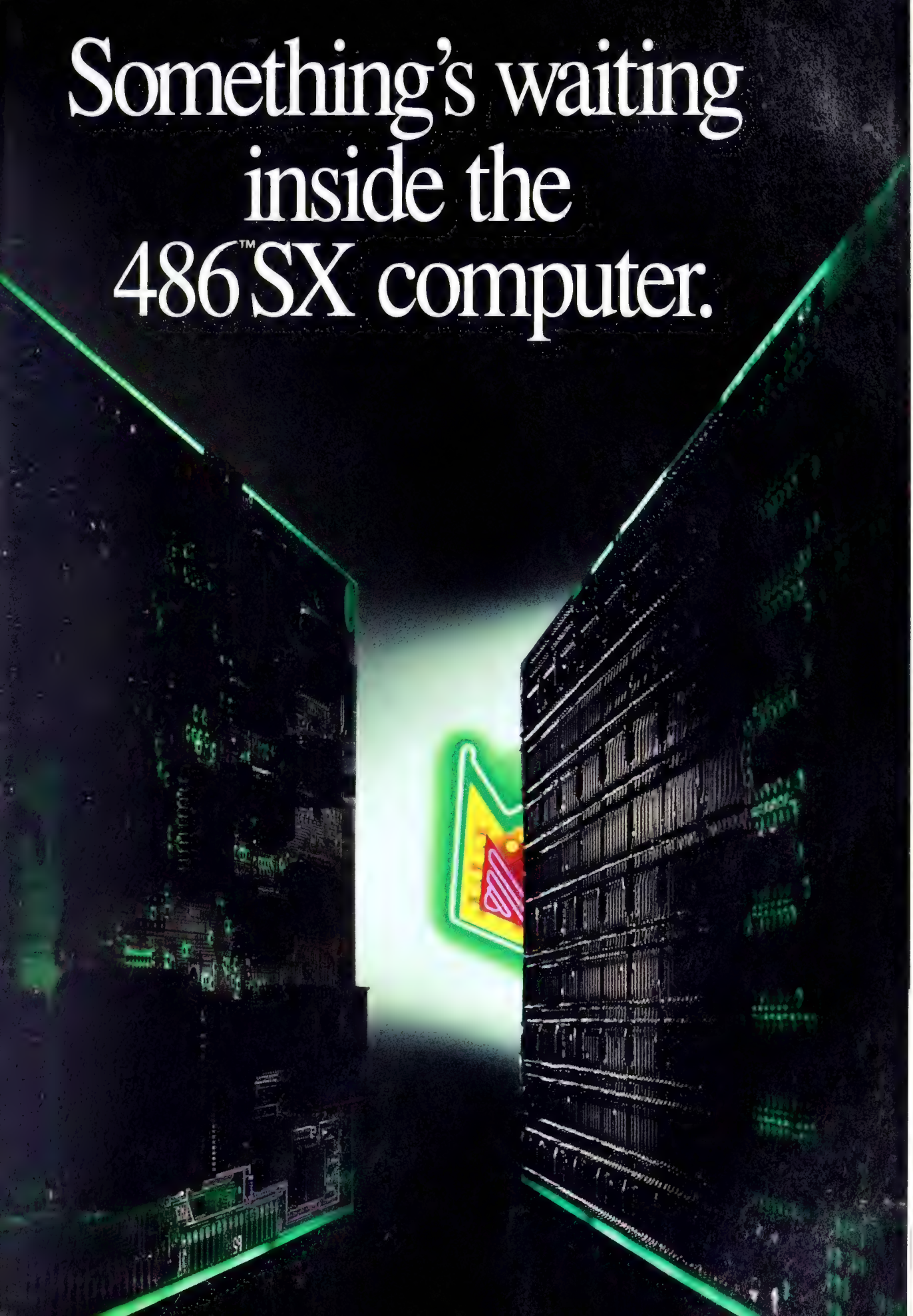

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Books

paychecks leaner. But they would cc tainly slow the obscene spiral set in m tion by Patton, Crystal, and the legio of consultants who followed.

BY JOHN A. BYRN

Senior Writer Byrne has written on exec tive pay for eight years.

BOOK BRIEFS

THE WINNER'S CURSE: PARADOXES AND ANOMALIES OF ECONOMIC LIFE
By Richard H. Thaler
Free Press • 200 pp • $22.95

BIGGER PICTURE

Do economists live in this worl Typically, economic models a sume that people are both rati nal and selfish. Yet look at your dai paper. Think about the Middle East a Yugoslavia—rational? Or firefighte who risk their lives rescuing childr from a burning building—selfish? Pe ple often are cooperative, altruistic, irr tionally hostile, or trendy—which mak it hard to predict what they will do.

Some economists would say their pr fession's narrow view of human natu is its chief failing. In *The Winner Curse*, Richard H. Thaler, a Cornell Un versity economist, has documented host of facts or observations that contr dict standard economic theory.

By unraveling a series of real-wor puzzles with philosophical and practic implications, Thaler illuminates son fairly abstruse ideas in an entertainin way. I enjoyed the examples having do with the securities markets and fo eign-exchange trading. For instance, th tendency of small-company stocks to ra ly at yearend and into the New Year the "January effect"—is one such anon aly. In an efficient market, such a we known profit opportunity should ha disappeared years ago. Similarly, Thal explores why closed mutual funds usu ly sell at a discount to their net ass value. If you love games, you'll have fu with his chapters on cooperation an bargaining. Also intriguing are insigh into why the winner at an auction oft pays too much, or why a janitor at shoe manufacturer earns less than a ja itor at a computer company.

The economic view of behavior is sim plistic. Still, we turn to economists wh we need help divining the impact of ta cut proposals or regulatory rules b cause they have useful insights in markets and prices. The best minds economics today, as Thaler's provocati book suggests, are trying to suppleme those insights with a broader unde standing of what makes people tick.

BY CHRISTOPHER FARR

Risk control for businesses that bruise easily.

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BUSH CAN NO LONGER SHY AWAY FROM PUBLIC INVESTMENT

BY ROBERT KUTTNER

Spending on public works feeds private payrolls. It could also give a boost to technology in the form of high-speed railroads and optical-fiber networks, among other things

The President's men are beginning to worry that there may be no easy path out of this recession. Last month in this space, I explained why an investment-led recovery is the best way to jump-start the economy. Let me now describe why it is probably the only way. Consider the alternatives:

Monetary easing. With fiscal stimulus ruled out by huge deficits, the Federal Reserve is trying to revive the economy with cheap money. But here, the problem is anxious banks and a shortage of creditworthy borrowers. The culprit is the fallout from the financial excesses of the 1980s, compounded by the Administration's own behavior. The Federal Deposit Insurance Corp. and Resolution Trust Corp. are now the nation's biggest holders of commercial real estate. The Bush Administration detests the idea of the government owning commercial property and, along with the rest of America, is focused on short-term balance sheets. Thus, in a soft real estate market, the government keeps dumping properties to raise cash. This depresses the rents that can be charged by viable, privately owned properties and pulls them into default, too—further increasing bank losses. Hence, the bank/real estate collapse keeps feeding on itself, with an assist from the Administration's fire sale.

In this climate, cheaper money does only so much. Very low interest rates stimulate consumer spending, but the erosion of asset values and purchasing power may have reached a point where cheap money by itself is powerless to ignite a general recovery. The stimulative effect of low interest rates is also offset by the fact that America's "creditors" include tens of millions of retired people whose savings are in bank CDs, money-market funds, and Treasury securities. Every cut in interest rates reduces their purchasing power.

Capital-gains relief. In the late 1970s, those arguing for capital-gains tax cuts made three claims. First, higher aftertax returns on capital would induce more savings and investment. Second, capital-gains breaks would stimulate more sales of appreciated stock and hence would boost tax revenues. And third, by lowering capital costs, capital-gains breaks would make U. S. industry more competitive.

The effect of the tax cuts of 1978 and 1981 disproves each claim. Capital income got tax favoritism, but savings rates fell. Investment rates were maintained (barely) by foreign borrowing. Despite the supposed "unlocking" effect, there was a onetime sell-off of appreciated stock, but higher revenues only partly offset lower rates. If anything, the real economy today suffers from too much financial trading, not too little. And the market is dom inated by pension funds and life-insuranc companies whose capital gains are not ta able at all. As for competitiveness, lower ca ital costs are indeed desirable over the lon term. However, industry mainly invests whe it smells customers, who are not in evidenc today. Low interest rates also reduce capit costs; but in this recession, lower interes rates have had little impact on investmen President Bush was right when he called th idea voodoo economics the first time around

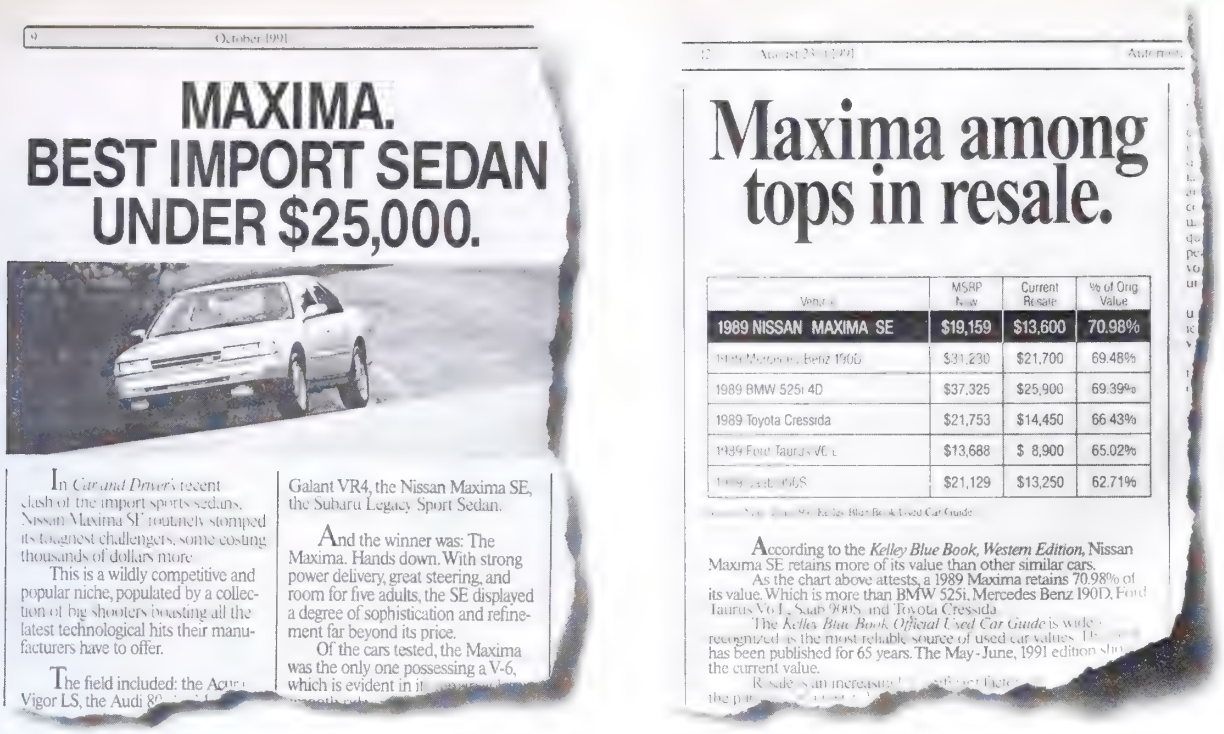
Middle-class tax relief. Although more a tractive politically, the Democratic progra of tax cuts for the middle class is also uncon vincing as a recovery strategy. Why? Becaus the proposed cuts are deficit-neutral. Senato Lloyd Bentsen's (D-Tex.) proposal to shift som defense spending to tax relief might contrac the domestic economy, because consumer have a higher appetite for imports than th Pentagon does. The Gore-Downey alternative- taxing the rich to relieve the middle class— better, since the middle class spends more its income than the rich. Still, a deficit-neutr tax cut is mildly stimulative at best unless involves massive public outlays.

That leaves public investment. The virtue public investment is that 100¢ on the dollar a tually get invested, unlike a tax break. A though nominally public, most such inves ment quickly winds up back in the privat sector, for the contractors are invariably pr vate businesses. Public investment connote old-fashioned public works. But it can als mean technology-stimulating projects such a high-speed rail and optical-fiber networks.

Public investment feeds private payroll Some public investment may be wasteful—bu not half as wasteful as the hundreds of billion of dollars in useless office buildings brought t you by the genius of the private market. program of public investment could even ju tify increased borrowing via a capital budge since the borrowing would be dedicated to i vestment rather than to consumption.

Can a public-investment cure do the jo quickly enough? In 1941, when the nation m bilized for war, unemployment melted fro 11.8% to 2% in just six months. What pr vents the Administration from embracing th cure? The same thing that feeds the self-d feating fire sale of commercial real estate—id ology. Yet when it proved politically expedien President Bush swallowed his principles o both the civil rights bill and on the extensio of unemployment compensation. It remains t be seen whether Bush will be sufficiently de perate or sufficiently opportunistic to embrac that old Keynesian devil, public works.

ROBERT KUTTNER IS ECONOMICS CORRESPONDENT FOR *THE NEW REPUBLIC* AND AUTHOR OF *THE END OF LAISSEZ-FAIRE*



October 1991

MAXIMA. BEST IMPORT SEDAN UNDER $25,000.

In *Car and Driver's* recent clash of the import sports sedans, Nissan Maxima SE routinely stomped its toughest challengers, some costing thousands of dollars more.

This is a wildly competitive and popular niche, populated by a collection of big shooters boasting all the latest technological hits their manufacturers have to offer.

The field included: the Acura Vigor LS, the Audi 80, the Galant VR4, the Nissan Maxima SE, the Subaru Legacy Sport Sedan.

And the winner was: The Maxima. Hands down. With strong power delivery, great steering, and room for five adults, the SE displayed a degree of sophistication and refinement far beyond its price.

Of the cars tested, the Maxima was the only one possessing a V-6, which is evident in it

Maxima among tops in resale.

Year	MSRP New	Current Resale	% of Orig. Value
1989 NISSAN MAXIMA SE	**$19,159**	**$13,600**	**70.98%**
1989 Mercedes Benz 190D	$31,230	$21,700	69.48%
1989 BMW 525i 4D	$37,325	$25,900	69.39%
1989 Toyota Cressida	$21,753	$14,450	66.43%
1989 Ford Taurus V6 L	$13,688	$ 8,900	65.02%
1989 Saab 900S	$21,129	$13,250	62.71%

Source: 1991 Kelley Blue Book Used Car Guide

According to the *Kelley Blue Book, Western Edition,* Nissan Maxima SE retains more of its value than other similar cars.

As the chart above attests, a 1989 Maxima retains 70.98% of its value. Which is more than BMW 525i, Mercedes Benz 190D, Ford Taurus V6 L, Saab 900S, and Toyota Cressida.

The *Kelley Blue Book, Official Used Car Guide* is widely recognized as the most reliable source of used car values. It has been published for 65 years. The May-June, 1991 edition shows the current value.

Resale is an increasingly significant factor in the pur

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The May-June edition of the *Kelley Blue Book* says the '89 Maxima SE is one of the best sports sedans money can rebuy. Beating perennial stalwarts like Mercedes and BMW.

So if you're contemplating a sports sedan, consider test-driving a Maxima. It outdistances every opponent in what may be this year's most hotly contested automotive category.

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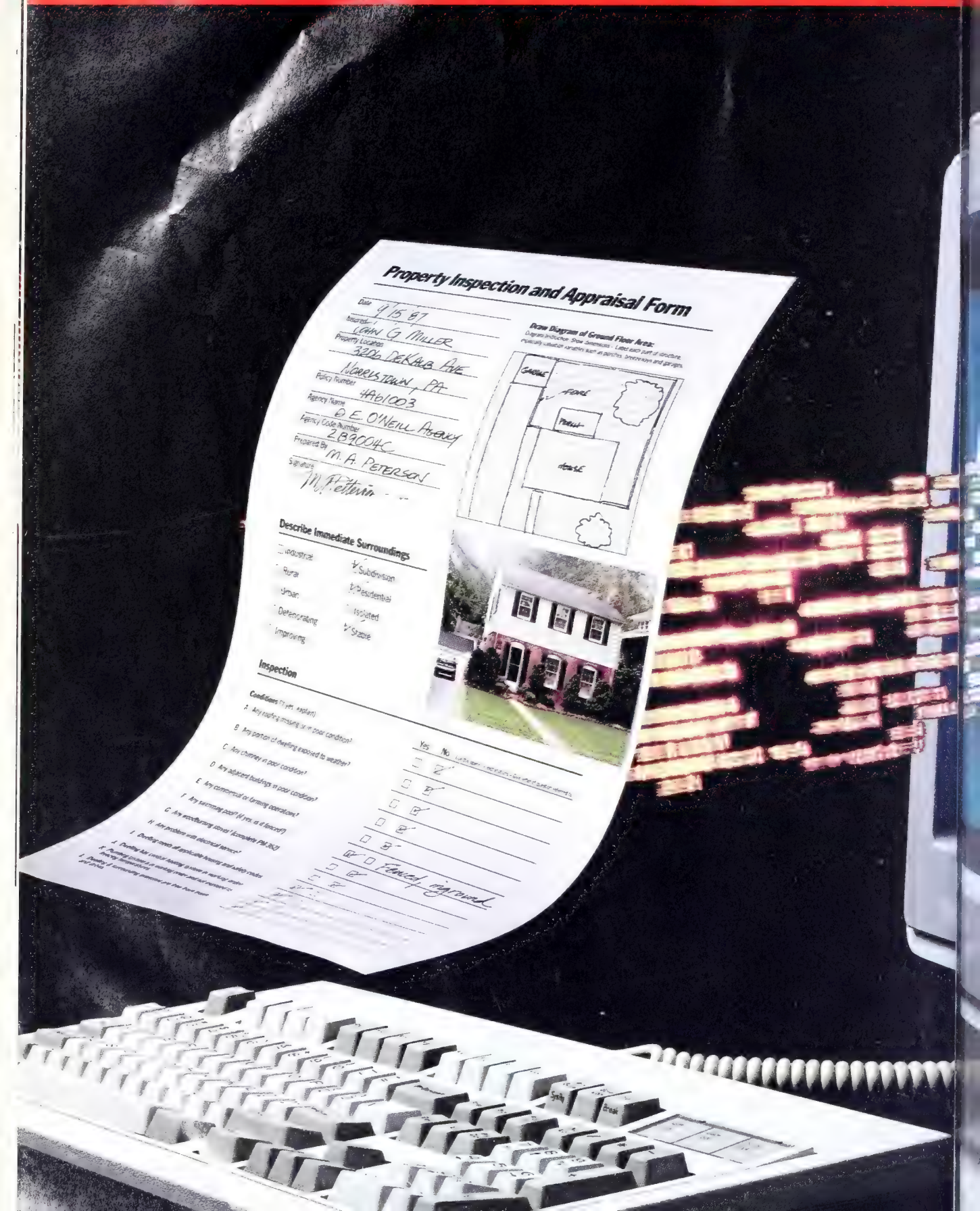

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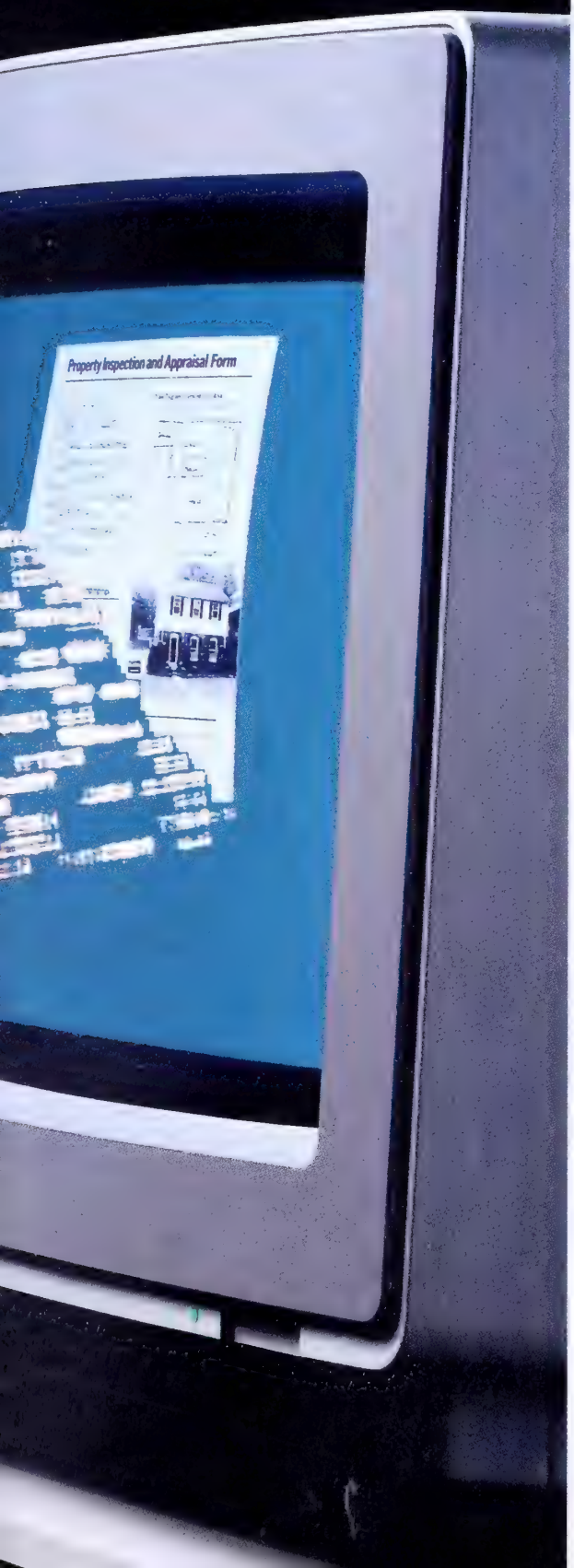

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BY GENE KORETZ

FORECAST FOR THE WINTER: A BLIZZARD OF PINK SLIPS

Disconcerting as the October employment report was, further bad news on the job front probably lies ahead. That's the conclusion of Dan Lacey, editor of *Workplace Trends* newsletter, which has been keeping track of permanent staff cuts announced by major U. S. corporations since 1988.

"Although the recession supposedly ended last spring," he says, "the number of announcements of staff reductions has skyrocketed in recent months."

Lacey's tabulations indicate that Corporate America in the third quarter unveiled plans to do away with a record 147,507 positions. That's 93% more than in the second quarter and more than three times the number of cuts announced in the third quarter of last year. What's more, the pace accelerated in October to more than 2,700 per business day, compared with 2,200 in the third quarter. Through Nov. 1 of this year, with two months to go before yearend, Lacey reports that some 300 companies announced a total 399,034 staff cuts, vs. 316,047 cuts announced by 224 corporations in all of 1990.

The financial-services industry led the staff-reduction parade in the third quarter, registering 47,431 positions to be eliminated. (That doesn't include cuts generated by the continuing savings-and-loan debacle, which aren't usually picked up by Lacey's tabulation.) The computer industry came in second with 20,565 staff cuts, followed by such industries as chemicals, transportation, aerospace, mass media, and retailing.

A RISING DRUMROLL OF CORPORATE LAYOFFS

DATA: *WORKPLACE TRENDS*

Although staff reductions have been concentrated in such East Coast states as Connecticut, Massachusetts, New Jersey, and New York, Lacey says that the geographic epicenter of the staff-cutting trend is shifting westward as more industries and areas join in. A relative newcomer to the list, for example, is the petroleum industry, which announced that it was eliminating 10,368 positions in the third quarter. And California companies generated about 16% of the staff cuts announced through September, compared with 12% in 1990.

Lacey notes that the downsizing trend is more than a cyclical phenomenon. "It's part of a permanent effort to lower labor costs," he says, "including such strategies as contracting out more and more work and cutting back such benefits as pensions and health coverage."

What's more, he points out that companies are legally required to announce mass layoffs in advance, and he tabulates such personnel cuts when they're announced rather than when they take effect. "Many of the people affected by this year's cuts," he warns, "won't show up in labor market statistics until 1992."

IF FOREIGNERS ARE LENDING, CAN U.S. BANKS BE FAR BEHIND?

There is now "at least some hope that the worst of the bank credit crunch may be over," says William V. Sullivan Jr. of Dean Witter Reynolds Inc. The money-market economist notes that while total commercial bank credit expanded at a modest 3.2% annual rate in September, commercial and industrial loans rose for the first time in six months, hitting a 6.7% annual clip. Indeed, the $3.4 billion gain in the C&I category was the largest in 23 months.

Thus far, however, the pickup in business lending has occurred exclusively on the balance sheets of foreign-related banks, which added $4 billion in C&I loans in September. With regulatory restraints apparently inhibiting business lending by big U. S.-chartered commercial banks, foreign-chartered institutions are continuing to gain market share—accounting for 23.1% of all C&I loans extended in September, compared with 19.2% a year earlier.

Still, Sullivan thinks there's a fair chance that U. S. banks will soon follow the lead of their foreign competitors by accelerating business lending. And if they do, he adds, there's also a risk that intermediate and long-term interest rates could be pushed higher. That's because any surge in C&I loans by the banking sector may well be accompanied by a cutback in its appetite for federal debt—just at a time when the Treasury's cash needs will be rising sharp

AS THE U.S. ECONOMY DROOPS, IT COULD DRA CANADA DOWN WITH IT

When Canadian authorities a nounced that their nation's eco omy had expanded at a 4.9% annual ra in the second quarter after languishi in recession for a full year, many o servers felt the U. S. economy wou not be far behind. Relatively stro growth in Canada, one of America major export markets, so the theo went, would help sustain the incipie U. S. recovery.

Now, however, speculation is focu ing on the reverse scenario—that t sagging U. S. economy could drag Can da back into recessionary territory. A ready, evidence of a sharp slowdown growing. Retail sales and home sales Canada are losing steam, and emplo ment growth stalled in the third quarte With manufacturing activity falling ar monetary growth weak, the governme estimates that gross domestic produ actually fell 0.3% in August.

Economist Robert E. Mellman of Mo gan Guaranty Trust Co., who had e pected third-quarter Canadian GDP rise at a 2.5% annual rate, now think the pace could be below 1%. "About t only area of significant strength h been exports," he says, "and signs th growth in the U. S., Canada's key e port market, is stalling do not bode we for the Canadian economy."

THE FED MAY BE TIGHTENING BY JUST STANDING STILL

With the federal funds rate rel tively stable since May, man economists chastise the Federal Reser for failing to ease in the face of a fa tering economy. And those who think is real interest rates rather than nom nal rates that count claim that the Fe has, in effect, been tightening by stan ing still. Because inflation has slowe since May, argues Robert Brusca Nikko Securities Co. International, t real federal funds rate has actually rise from 0.75% to 2.1%. Just how tig is that from a historical perspectiv Brusca notes that the real federal fun rate averaged a negative -2.0% at t end of four of the past five recessions

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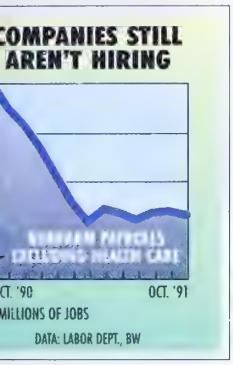
VEMBER 18, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

HE PALL OVER THE RECOVERY? LAME IT ON PINK SLIPS

The case of the missing recovery grows murkier. The latest data offer few clues that point to a growing economy. Factory orders are falling, the struction industry is on shaky ground, and companies tinue to lay off more workers than they hire.

Even the government's own reading of the economy 't provide much of an alibi for the recovery's where-uts: The index of coincident indicators—which casts nt on current conditions—was flat in September, while leading indicators index hasn't risen since July.



The recent batch of bad news heightens the mystery of the recovery's lack of vitality (page 36). But policymakers in Washington are on the case. The Federal Reserve moved aggressively on Nov. 6 by cutting the discount rate—its charge for bank borrowings—by a half-percentage point, to 4.5%. The central bank also lowered the federal funds rate to 4.75%, just ew days after the rate had been cut by a quarter-nt, to 5%. That's its lowest level in 18 years.

The Fed cited the "sluggish expansion of the mone-y and credit aggregates" as a reason for its move, ich had been expected. But the timing was a bit prising because the action came in the middle of the easury's quarterly refunding, which was getting a d reception by investors, and it immediately followed te and local elections across the country.

Banks responded to the move by cutting their own me lending rates from 8% to 7.5%. Lower borrowing ts will help the economy in 1992, but right now the concern for most consumers is a steady paycheck.

OBLESS INES ARE ETTING ONGER

Job growth is almost nonexistent. Nonfarm payrolls dropped by 1,000 jobs last month. Less than half of the industries surveyed hired workers in October, and t 50.8% increased jobs in September.

Since employment hit bottom in April, only 282,000 v jobs have been created—far below the average of ,000 added in the first six months of past postwar overies. And almost all of today's workers have been ed in the health care field. Excluding those workers, s have edged up by just 67,000 since April (chart).

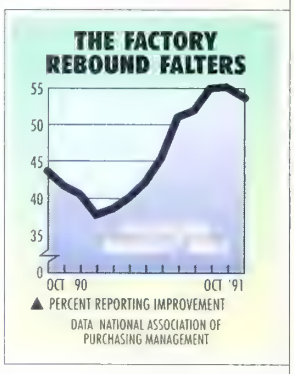
Meanwhile, the ranks of the unemployed continue to band. The jobless rate rose to 6.8% in October, from % in September. Changes in the unemployment rate tend to lag behind swings in the business cycle, but at this point in past recoveries, the unemployment rate was already in a steady downward trend.

Job prospects are not good for those pounding the pavement. The Conference Board reports that its index of help-wanted advertising was flat in September, from its low level in August. Despite the recovery's start in spring, companies are very reticent about adding jobs.

GOODS PRODUCERS ARE IN TROUBLE

Hiring is especially slack in the goods-producing side of the economy. That's a dangerous development because the rebounds in factory activity and in home-building have accounted for much of the boost in overall economic growth since spring. If these supports topple, the fourth quarter will be especially dreary.

Manufacturing jobs dropped by 32,000 in October, on top of a 31,000 loss in September. Pink slips were rampant in factories producing industrial machinery, electronics, and transportation equipment. And the factory workweek fell by six minutes, to 40.9 hours. The shorter week and job losses last month suggest that industrial output may have fallen in October.



The news from the National Association of Purchasing Management was also downbeat. The purchasing managers' index fell to 53.5% in October, from 55% (chart). The index remains above 50%—a sign that the factory sector is expanding. But the momentum is slipping.

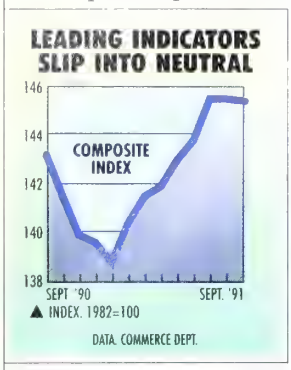
That's because demand remains weak. New orders for factory goods dropped by 1.7% in September, after falling 2% in August. Unfilled orders declined by 0.6% in September. And although factory inventories increased a small 0.4% in September, companies seem in no hurry to rebuild stock levels. This means that assembly lines won't be any busier this quarter, and factory jobs will remain hard to find.

There may be fewer construction jobs, as well, this quarter. Construction payrolls have fallen in 8 of the past 10 months, including a loss of 29,000 in October. The rebound in housing just hasn't been strong enough to offset the sharp slump in nonresidential construction.

In September, the 1.1% advance in total construction spending was led by a 2.9% gain in homebuilding. Spending on nonresidential projects, however, dropped 2% in September, its fifth consecutive decline. In addition, the

Business Outlook

F. W. Dodge Div. of McGraw-Hill Inc. says that contracts for new construction dropped by 5% in September. Nonresidential building contracts fell to their lowest level in eight years. With fewer projects on drawing boards, more pink slips are certain in the construction industry.



Hiring by service companies has taken up some of the slack created by the struggling goods side of the employment picture. Jobs in private service industries rose by 58,000 in October, but again, most new jobs were in health care. Retail trade cut 47,000 workers last month. Retailers don't seem to be hiring many workers for the holiday season. This suggests stores aren't anticipating a big rush of shoppers at yearend.

Such caution seems a good bet. Without a steady increase in new jobs and incomes, consumers—whose purchases support two-thirds of this economy—will be unwilling to boost their spending by much.

Already, consumer buying for this quarter is looking suspect. New, U. S.-made cars sold at a measly 6 million annual rate in October, down from 6.1 million in September. If consumer spending doesn't pick up soon, domestic demand this quarter could decline. And the index of leading indicators is raising questions about the outlook for early 1992.

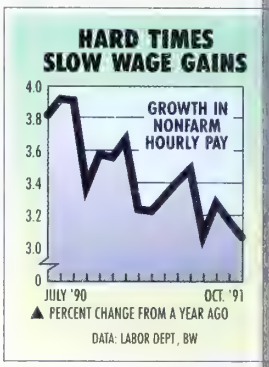
CASTING A SHADOW ON NEXT YEAR

The leading indicators—designed to foreshadow the economy's future—fell by 0.1% in September after no change in August (chart). A shrinking money supply, declining orders for capital goods, and a shorter factory workweek led the negative signals.

In addition, the index of coincident indicators was flat in September after falling 0.2% in August. And the October index should also be down. That's because the employment report indicates that three of the four coincident indicators were weak last month.

The slack labor markets are keeping downward pressure on wage growth. The average hourly wage dropped by 0.1%, to $10.41, in October. And because of a 12-minute cut in the workweek, weekly pay fell a sharp 0.7%. That suggests personal income may have fallen last month.

Hourly wages have increased by only 3.1% in the past 12 months. That's the slowest wage gain in 3½ years and far below the growth of nearly 4% posted in the summer of 1990, when the recession started (chart).



The slowdown in hiring and work time has caused little drag on production levels. The result is that productivity improved in the third quarter. Output per work hour in the business sector rose at an annual rate of 2.3% last period, the first gain in a year. Output grew by 2.9%, while total hours worked were up by 0.6%, at an annual rate.

The increase in productivity kept the lid on unit labor costs. They rose at a 1.1% annual rate—the smallest rise since 1988. Factory unit labor costs fell by 0.7%. That's a good sign for inflation.

Slower growth in unit labor costs also should help corporate profits, which were still sagging in the third quarter even as the economy as a whole expanded (page 39). Figuring out how to keep the recovery on track, however, is a puzzle policymakers have yet to solve.

Clearly, any answer will have to include faster job growth. That would boost personal income and give a lift to consumer spending. Until the labor markets show clearer signs of strength, though, the recovery is likely to remain invisible to most consumers.

THE WEEK AHEAD

PRODUCER PRICE INDEX

Wednesday, Nov. 13, 8:30 a.m.
Producer prices likely rose by just 0.2% in October, say economists surveyed by MMS International, a unit of McGraw-Hill Inc. Excluding food and energy, prices are expected to have advanced by 0.1% last month. Inflation in producer prices has been extremely subdued. In September, total producer prices increased a mere 0.1% and were unchanged when food and fuel costs were excluded.

RETAIL SALES

Thursday, Nov. 14, 8:30 a.m.
Retail sales were unchanged in October, according to the MMS economists. That's suggested by the weakness in car sales and the rise in consumer pessimism. A stronger pace of car buying had fueled a 0.7% gain in retail sales in September.

CONSUMER PRICE INDEX

Thursday, Nov. 14, 8:30 a.m.
Consumer prices probably increased by 0.2% in October, though the pace without food and energy costs is likely to be a faster 0.3%. In September, the CPI jumped by 0.4% for all items and after excluding food and energy.

INDUSTRIAL PRODUCTION

Friday, Nov. 15, 9:15 a.m.
Output at the nation's factories, utilities, and mines was little changed in October. That's indicated by the declines in factory jobs and the workweek. In September, industrial production edged up by just 0.1%. In the same news release, the Federal Reserve is expected to report that the capacity utilization rate for all industry fell slightly last month, to 79.6% from 79.7% in September.

BUSINESS INVENTORIES

Friday, Nov. 15, 10 a.m.
The MMS economists expect that inventories held by manufacturers, wholesalers, and retailers increased by 0.2% in September, after falling 0.1% in August. Factories already have reported a 0.4% rise in stock levels. Business sales probably rose a modest 0.4% in September after no change in August. That's suggested by increases in factory shipments and retail sales.

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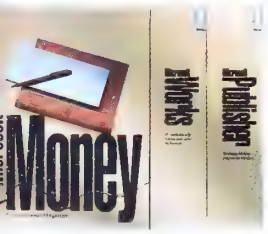

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THE ECONOMY

NOVEMBER 18, 1991

WHERE'S THE GROWTH?

SO FAR, RECOVERY HASN'T MEANT EXPANSION

This is not the way the story was supposed to go.

When the gulf war ended in February, the U. S. economy seemed ready to snap to and march onward toward recovery. Revitalized consumers opened their wallets and started spending again on homes, cars, and other big-ticket items. Manufacturers called back laid-off workers, and factories started humming again. By July, the recession of 1990-91 looked like a finished chapter for the record book.

But as these autumn days dwindle to a precious few, the economy is looking more and more wan. Responding to mounting signs that the economy is sinking into a coma, the Federal Reserve cut its discount rate—the interest it charges on loans to banks—by half a percentage point, to 4.5%. Banks quickly took the cue, lowering their prime rate a half point, to 7.5%. Trouble is, all this easy credit still may not be low enough to shake the economy awake. Without further cuts in rates, or some other dramatic lift for the economy, the recovery may not start in earnest until the new year.

The malaise is even infecting parts of the economy that were supposedly immune. Manufacturers, who were expected to lead the U. S. out of recession, instead are shrinking back. Facing uncertain consumer demand at home, sluggish markets overseas, and stiff foreign competition, manufacturers in August began slashing payrolls. Today, factory employment is 17,000 below its level in April, when many economists think the recovery began. By firing rather than hiring, explains economist Ed McKelvey of Goldman, Sachs & Co., "they broke the link that keeps the economic cycle going upwards."

HOLDING PATTERN. That's why the economy needs another jolt. The latest government statistics are almost uniformly depressing (charts). Unemployment is up, durable-goods orders are trending down, new-home sales have plunged, and car sales are just plain appalling. Moreover, consumers and businesses are loath to take on new debt. "The economy is, if not outright stalled, certainly in an extremely slow growth pattern right now," says Michael J. Durham, senior vice-president for finance at AMR Corp., American Airlines Inc.'s parent.

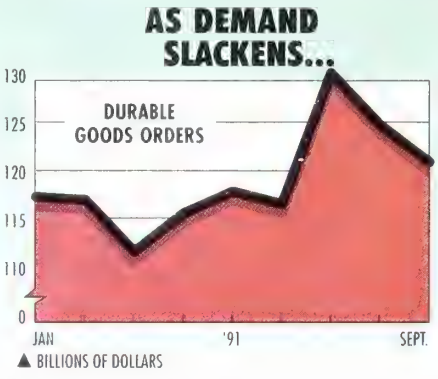
AMR is far from being the only company that foresees an extended period of little or no economic growth. Much of Corporate America is cutting costs in hopes of lowering their break-even points (page 39). The least fortunate among them may be Pentagon contractors, which face huge defense budget cuts (page 41). And even the professional pols in the White House are panicking as the Administration's optimistic economic forecasts appear to be fallin short, with potentially unhappy cons quences for Republicans in 1992 (pag 42). With his grades for handling th economy falling ever lower in the poll President Bush on Nov. 5 canceled long-scheduled trip to Asia and will co centrate instead on domestic affairs.

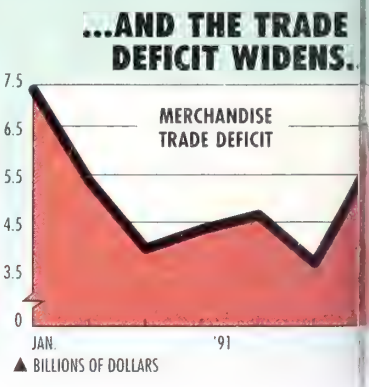
The outlook isn't uniformly gloom Personal income continues to grow, alb it slowly. Productivity in the third qua ter rose by a hefty 2.4%, helping boost U. S. competitiveness. The infl tion rate is declining to below 4%, a lev

THE ECONOMY'S WEAKENING PULSE

It's trends like these that prompted the Federal Reserve to cut the discount rate to 4.5%, its lowest level in nearly 19 years. After an early-summer advance, the economy seems to be dozing off

DATA: CONFERENCE BOARD, BUREAU OF LABOR STATISTICS, COMMERCE DEPT





By continuing to fire rather than hire, says economist Ed McKelvey, manufacturers 'broke the link that keeps the economic cycle going upwards'

seen for almost 20 years. That uld help to push long-term interest es even lower, making business in- tment and housing cheaper—and as- ing that the economy will eventually ne back to life.

TORY FIZZLE. But at the moment, it's ting harder to focus on the bright ts. Take autos, for example. After king this year at an annual rate of million in July, car sales have now en back to 6 million. Ford is shutter- two plants because of slack orders m rental fleets. And while fourth-quarter auto output is still planned to be up 9.4% from last year's levels, those optimistic plans are being scaled back almost weekly. As the auto industry hunkers down, it drags with it a big chunk of plastics, steel, and even electronics production. Says David M. Hoag, chief executive of LTV Corp., a Dallas-based steelmaker: "The order books have been strong the past four or five months, largely because of auto industry orders. But the news isn't good."

Or, you might say the news is just plain bad. Layoffs keep mounting in many service industries, with banking and retailing two notable examples. The unwillingness of many shell-shocked bankers to make loans is starving a wide swath of businesses. Taken together, these woes have left businesses crawling around in a decidedly gloomy atmosphere, more concerned with surviving the present than investing for the future. Says one senior Fed official: "In the business community, the power of negative thinking seems to be sweeping the economy."

The retrenchment by manufacturers is

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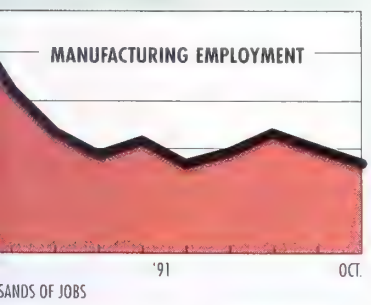

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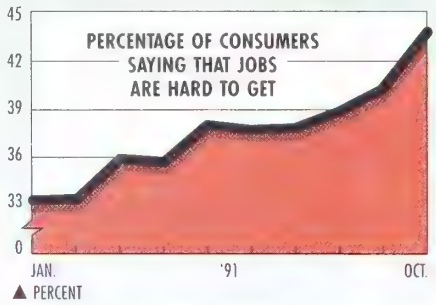
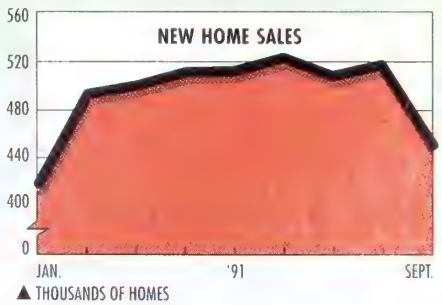


...ARE LESS EAGER TO BUY NEW HOMES



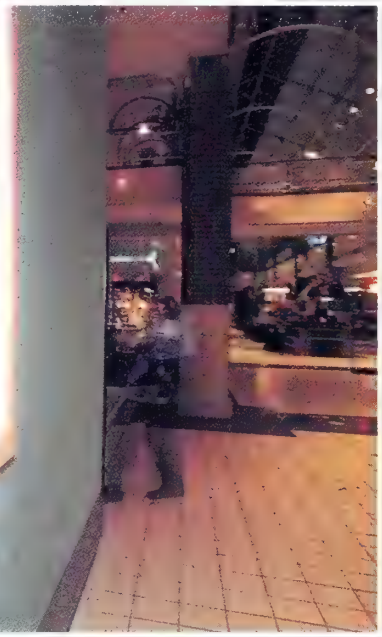
an especially bitter disappointment. The conventional wisdom on manufacturers was that they already had worked off their fat. Factories, the thinking went, would be one of the few sources of growth for the early 1990s. Now, depressingly, it is turning out that many manufacturing companies are continuing to chop jobs.

One reason is the dramatic worsening of the U. S. trade deficit since June. Demand from abroad was supposed to give manufacturers the push they needed to get the U. S. economy growing again. Indeed, export markets were a ray of sunshine while the rest of the economy struggled with recession.

Since April, as economies overseas turned sluggish, exports have been running flat. America's biggest trading partner, Canada, seemed to be pulling out of its recession. But in August, its economy again began to contract. Germany now is struggling, and U. S. exports there have fallen by 35% since April. Britain, one of the biggest buyers of U. S. exports, is now slowly emerging from a fierce 18-month recession. "Last quarter disappointed us. Europe is slipping, and we had only little pockets of improvement in the U. S.," says Senior Vice-President Mac Sims of Clark Equipment, a forklift maker that gets about 40% of its revenues from overseas.

Making matters worse for the trade gap, imports in July and August surged far faster than anyone anticipated. That means foreign companies took business away from U. S. manufacturers and probably cut more than a percentage point off third-quarter gross national product, which grew at an annual rate of 2.4%. If this tide of imports keeps rising in the fourth quarter, says David D. Hale, chief economist at Kemper Financial Services Inc., "we're in far worse trouble than anyone realizes."

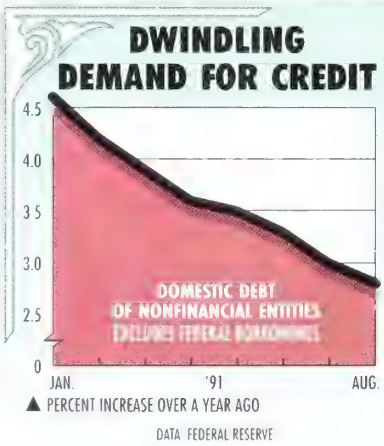
Faced with that challenge from abroad, manufacturers are trying to cut labor and other costs. Look at Du Pont Co. The chemicals giant is in one of the few industries that has maintained employment during the recession. But to keep a competitive edge on foreign rivals, the company has embarked on a cost-cutting program that some analysts estimate could trim about 15,000 jobs, or 11% of its payroll. Hewlett-Packard Co., another generally successful company, is trimming about 3,000 employees, or 3%, from its payroll.



> If imports keep growing, says David Hale of Kemper, 'we're in far worse trouble than anyone realizes'

'IN LIKE A LION.' Other manufacturers are shrinking because their chief client—the Pentagon—is slashing items off its shopping list. Defense cuts are especially tough at companies in New England, California, and Texas. A week ago, Stratford (Conn.)-based Textron Lycoming, which makes engines for tanks and helicopters, announced plans to cut 16% to 20% of its work force—500 to 800 jobs—over the next two to three years. And General Dynamics Corp.'s Electric Boat Div., the submarine builder based in Groton, Conn., laid off about 1,000 employees this year and expects defense cuts to lead to a halving of its 17,000-worker payroll within four years.

With all these layoffs on the horizon, it's no surprise that consumer confidence is plunging. That goes double for homebuyers. The residential housing market is on the rocks despite the lowest mortgage rates in 14 years. "The real estate market came in like a lion and went out like a lamb," says Barbara Corcoran, president of the Corcoran Group, a New York City real estate firm. "June and July exceeded our optimistic expectations, but we were shocked at how quickly it tapered off through August and September." She reports that business since the end of the summer is 50% below last year's already depressed levels.



PARALYZED. What could get the economy growing again? A pickup in world growth, for one thing, would help stimulate businesses from accounting firms to computer makers. But that isn't something the U. S. can control. Fresh government spending, a traditional stimulus, looks unlikely for now, too. Uncle Sam is paralyzed by a record deficit that in the fiscal year ending next September is seen hitting $325 billion. Indeed, budget cuts and tax increases at the state and local government level are draining strength from the economy at just the wrong time.

That leaves the Fed, which has been cutting rates steadily, but less quickly than economic performance seems to demand. Eventually, a respectable recovery will come—the Fed already has done enough to assure that. The question is when. If it's to happen soon, rates must fall sharply. Otherwise, the economy may be stuck in a netherworld between recession and expansion for some time.

By Michael J. Mandel and Christopher Farrell in New York, with Resa King in Connecticut, Kevin Kelly in Chicago, and bureau reports

Turning out Chryslers in Sterling Heights, Mich.: Annual costs have been trimmed $3 billion in the past two years, and even that isn't enough

LL THAT LEAN ISN'T URNING INTO GREEN

en Corporate America's most painful cuts haven't led to permanent gains

It's like the annoying drip, drip, drip of a leaky faucet. Every week or two, even as the economy struggles to gain strength, yet another of America's big-name companies announces a ma- cost-cutting program. As a result, panies as diverse as Colgate-Palm-e, Du Pont, and Hewlett-Packard are ng big write-offs. Wall Street bulls ue that all the trimming has posi- ed many companies for dramatic fit gains at the first uptick in the nomy. But with a slow recovery, a question arises: How many compa- are really lean—lean enough to post rt profit gains even in a stagnant nomy?

ne sad answer: in all too many indus-s, not many. Oh, sure, the layoffs e been real and painful. And costs at y companies have come down dra- ically. But profits are still sagging (page 128). Many of the gains from cutting cost are being wiped out by fierce price competition. Moreover, U. S. companies too often have higher costs than foreign rivals, especially in white-collar staffing and pay. And high debt left over from the 1980s is still eating away at profits, despite heavy cutting in other areas. The upshot: While a few leaders may do well before the economy begins to expand in earnest, for too many sluggish growth will mean more layoffs and scrawny earnings.

ERODING ADVANTAGE. The struggles of Chrysler Corp. show how hard it is for companies to get a lasting boost from cost-cutting. The No. 3 U. S. auto maker lost just $82 million in the third quarter—a stellar performance, next to red ink totaling $1.1 billion at General Motors and $574 million at Ford. Analysts also expect Chrysler to break even in the fourth quarter, while GM and Ford lose money again. That's because Chrysler has cut its annual costs by $3 billion in two years, or about 11% of total costs.

Layoffs aside, much of Chrysler's progress came from an innovative program to work with suppliers to cut parts costs. But the company stopped at almost nothing to get further gains. It no longer chrome-plates parts that aren't visible, for instance. And it claims to have cut its long-distance phone bill 40% by switching from AT&T to MCI.

So why aren't Chrysler execs grinning? With U. S. car and light-truck sales off 12% through October, dealer incentives and other discounts "just swamp all your cost controls and everything else," says Vice-Chairman Robert S. (Steve) Miller Jr. With lower prices, it now needs to sell 1.9 million cars to make a profit, up from 1.8 million last year. It only expects to sell 1.5 million this year, so it plans to cut another $500 million in 1992. Profits, says Chrysler Chief Financial Officer Jerome B. York, "should recover very quickly" in an upturn—but only one strong enough to

allow the company to limit discounting.

Chrysler's no anomaly, either. Even companies that are doing well are getting a working-over. For instance, Electronic Data Systems Corp., GM's computer services unit, is cutting $500 million from expenses by 1994—even though its sales and earnings were up a healthy 13% in the third quarter. And companies in cyclical slumps are augmenting prior cost-cutting. On Oct. 31, for instance, atop a previously announced cost-cutting plan, chemical maker Union Carbide Corp. said it would pare costs by $20 million annually at its slumping industrial gas operation.

Many companies are cutting far more white-collar employees than in past downturns. According to a Boston University survey of manufacturers, higher staff and white-collar pay scales are the major reason overhead was a punishing 26.6% of manufacturing costs at U. S. companies last year. That number is 21.6% in Germany and just 17.9% in Japan. Du Pont Co., for one, decided to slash $1 billion from its costs after benchmarking its performance against other international chemical companies. Its biggest cuts will whack white-collar ranks: About 1,900 jobs are being cut from its fibers business, plus 550, or 20% of the total, from in-house engineering.

Slumping overseas sales are also hurting many industries—especially in high technology, where many companies collect more than half their sales abroad. Computer makers Digital Equipment Corp. and Hewlett-Packard Co. have dramatically lowered their costs, for instance (table). But now a slowdown in Europe, which has fueled computer-company growth since the mid-1980s, threatens to put a damper on improvement.

Other companies, meanwhile, are grappling with consumer confidence and price-cutting back home. For instance, Frito-Lay Inc., PepsiCo Inc.'s most profitable unit, has lowered costs a lot. But with aggressive competition from Borden and Anheuser-Busch, Frito-Lay Chief Financial Officer Michael White isn't expecting an earnings spurt. Even after the recession, "we'll still have a very competitive environment," he says.

Sears is positioned for recovery—meanwhile, lower-cost rivals have been grabbing market share

Sears, Roebuck & Co. is wringing $1.3 billion in costs out of its bloated retailing operation this year and next, largely by eliminating about 33,000 jobs. That has helped to boost operating profits a bit so far this year, and Sears could get a big boost in a recovery. With shoppers searching for value, though, it's still losing market share to such lower-cost competitors as Wal-Mart Stores Inc. and Kmart Corp. As William J. Shaw, chief financial officer for Marriott Corp., notes: "The key, until the economy improves, is that you've got to find ways to provide better price value."

Then again, Marriott, Macy's, and other debt-heavy companies have bigger worries. Both got caught up in the financial frenzy of the 1980s. They're paying the price now. Marriott has slashed 2,5 jobs at headquarters and by closing down its hotel construction and develo ment unit. But such savings pale again the cost of servicing more than $1 billi in debt taken on in an overly aggressi hotel constructi program. Cost-cu ting helped Macy narrow its losses f the fiscal year end Aug. 3. But now i being hurt by high ad spending a weak demand.

CHEAP SEATS. B airlines may pro from extended a versity. The stro gest U. S. lines American, Unite and Delta—are hu kering down for continuing slum American Airlin Inc., for instanc has cut in half i $16 billion capit spending progra for the next fo years. It's und pressure to hold down costs because fare slashing by "thinly capitalize competitors, says Michael J. Durham, s nior vice-president for finance at AM Corp., American's parent. But Durha concedes that continued economic slu gishness could help stronger carriers it drives troubled rivals out of busines

In many other industries, the pressu shows no sign of letting up. Take ste The best minimill operators can bre even running at just 60% of capacit After years of slashing costs, big riva such as USX Corp.'s U. S. Steel and Bet lehem Steel are also close to that go But now the biggest minimill operato Nucor Corp., is using a new Germa steel-processing technology to lower dr matically the costs of rolling sheet ste A Nucor plant using the process Crawfordsville, Ind., can make money a 60% production rate—but is running 90%. And Nucor plans to build two mo of the mills in the next few years.

Competition may not be that heated every industry. But in most, compani that wait for a recovery to bail them o will be a long time hurtin'.

By Thane Peterson in New York, wi Wendy Zellner in Dallas, David Woodr in Detroit, and bureau reports

A PEEK AT WHERE EFFICIENCY IS IMPROVING

Company	Sales per employee 3rd quarter 1989	3rd quarter 1991
CHRYSLER	$53,242	$60,112
DIGITAL EQUIPMENT	24,949	28,561
DU PONT	59,234	66,380
HEWLETT-PACKARD	31,600	42,700*
MERRILL LYNCH	71,400	78,000
SEARS (merchandising only)	18,566	20,677
USX (steel only)	64,306	83,117

*Estimate

DATA: COMPANY REPORTS; GOLDMAN, SACHS & CO. ESTIMATE

ONGRESS DROPS A BOMB N DEFENSE

e B-2 may be history—and weapons contractors are nervous

Northrop Corp. vaulted into the aerospace big leagues in 1981, when it won a contract to build the B-2 Stealth bomber. Now, Northrop could be headed right back to the minors, thanks to Con-ss' recent decision to block the pur-se of any new B-2s this fiscal year. n a stunning rebuke, House and Sen- conferees working to complete the 2 defense-spending bill turned down Bush Administration's request for r more of the costly bat-ged bombers. Congress al-st never kills a major pons program. But com-nism's collapse, President h's unilateral cuts in U. S. lear forces, and technical ches in the B-2 embold-d House Democrats to dig heir heels.

ongress did authorize $3.4 on to keep existing pro-tion, research, and spare ts going, but it set tight ngs on $1 billion more that ld be used to build another Although Northrop in-s it isn't giving up, one use Democratic staffer s: "The B-2 is dead."

ow that legislators have ed one defense program, it be hard to stop Congress re it kills again. Growing ssure to slash defense to for tax cuts and domestic nding is the driving force. l weapons systems that expensive and geared pri-rily to the Soviet threat are vulnera-" says House Armed Services Com-tee Chairman Les Aspin (D-Wis.). ely targets range from costly new siles to giant submarines (table).

O MUCH CAPACITY.' It's hard to under-mate the impact on Northrop. The pany says it will continue to be prof-le. But B-2 work generates half of Los Angeles company's revenues 45% of its earnings. An end to the tract could reduce Northrop to sub-tracting for airframe makers McDon- Douglas Corp. and Boeing Co. hat might be a fate other defense suppliers could come to envy. Congress already is thinking of cutting the projected $291 billion fiscal 1993 defense budget by up to $20 billion. And industry experts predict spending of at most $200 billion in 1991 dollars by the end of the decade. "A shakeout in the industry is inevitable," says Loren B. Thompson, deputy director of Georgetown University's national security studies program. "There's just way too much capacity for what the nation requires."

Where will budget-cutters turn next? Navy contractors may take the biggest hit. General Dynamics Corp.'s Electric Boat Div. and Tenneco Inc.'s Newport News Shipbuilding & Dry Dock can count on only a handful of orders at $2 billion a pop for the Seawolf submarine. The Navy originally wanted 30 of the boats, designed to counter a new generation of Soviet subs. And Aspin has his eye on Lockheed Corp.'s $40 billion Trident II submarine-launched missile program.

Debate on the size of the Navy will begin in earnest next year. Congress will be asked to provide initial funding for a new $4 billion aircraft carrier. The Administration's plans for a fleet of 450 ships, including 12 carriers, are certain to be slashed. The Navy would get about a third of a $200 billion-a-year defense budget, enough to support fewer than 400 ships, including at most 10 carriers.

IN JEOPARDY. Downsizing on that scale could doom Bath Iron Works Corp. in Maine, one of only two shipyards that still builds destroyers. The other is Litton Industries Inc.'s Ingalls Shipbuilding Div. in Pascagoula, Miss. Bath is vulnerable because destroyers are virtually its only business, and its costs are slightly higher: Bath charged the Navy $513.5 million for its latest two-ship order, vs. Litton's $500.9 million price tag.

Aerospace companies are bracing for cutbacks, too. One likely candidate: the Army's $35 billion Comanche helicopter program. A team headed by United Technologies Corp. and Boeing is to begin production of 1,292 copters in 1996. McDonnell Douglas' $35 billion contract to build 120 C-17 transport planes for the Air Force also is in jeopardy. Congress, though, may be able to offer McDonnell Douglas some cheap consolation if it approves Saudi Arabia's $4 billion to $6 billion order for 72 F-15 fighters.

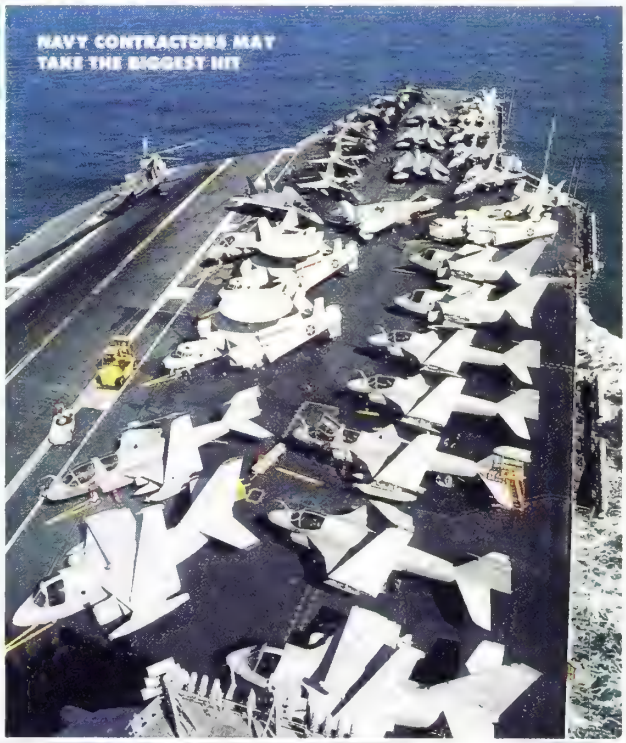
Amid all the budget-slashing, though, one big program keeps perking along: the Strategic Defense Initiative. The price of the House's refusal to yield on the B-2 was $4.2 billion for Star Wars and acceptance of the Senate's plan to deploy ground-based missile defenses near Grand Forks, N. D. But, House Democrats warn, just wait 'til next year.

By Amy Borrus, with Seth Payne, in Washington

WHAT MIGHT DROP OFF THE MILITARY MENU

Program/ Main contractors	Price per unit Millions
SEAWOLF SUBMARINE General Dynamics, Tenneco	**$2,000.0**
TRIDENT II MISSILE Lockheed	**29.2**
A-X NAVY BOMBER Bidders include Grumman, Lockheed, Boeing	**65.0**
F-22 AIR FORCE FIGHTER Lockheed, Boeing, General Dynamics	**59.4**
COMANCHE HELICOPTER United Technologies, Boeing	**8.5**
C-17 TRANSPORT McDonnell Douglas, Pratt & Whitney	**207.6**
CVH-76 CARRIER Tenneco	**4,000.0**

DATA: DEFENSE DEPT., BW



Harris Wofford told Pennsylvania voters that Washington couldn't care less about them—and they agreed

A NOVEMBER CHILL FOR BUSH

Voters are fed up with incumbents and inaction—bad news for the ultimate insider

Are voters angry about a stagnant economy and politicians' inability to do anything about it—or a host of other problems? You bet. On Nov. 5, Americans stormed to the polls and sent the White House and politicians everywhere an inescapable message: Start delivering results, or you're out on your ear.

In recession-racked Pennsylvania, appointed Democratic Senator Harris Wofford, whose campaign was an outsider's unrelenting attack on Washington's unconcern with the problems of ordinary folk, stunned former Attorney General Dick Thornburgh, a respected former two-term governor. In New Jersey, Republicans seized control of the statehouse for the first time in two decades as voters took revenge on Democratic Governor James J. Florio for raising taxes. And in Mississippi, Republican businessman Kirk Fordice dumped Harvard-educated Governor Ray Mabus with antigovernment attacks on welfare and racial quotas. Only in Washington State, where voters crushed a term-limitation initiative, could the ins find comfort.

The anti-incumbent sentiment has been building since last fall. But an economy that stays stubbornly sluggish despite President Bush's assurances that a recovery is under way has put vote in a frightened, surly mood. It doesn matter if you are Democrat or Republ can, voters seem to be saying: If you' part of the political Establishmen you're the problem.

NEW BALL GAME. That's bad news f Congress. But it's worse for Bush, th ultimate Washington insider. Bush po ster Robert M. Teeter's numbers sho that public confidence in the President economic stewardship has plunged. Ar other pollsters are fin ing that, by a 2-to margin, voters think th country is headed in th wrong direction. A 199 campaign that onc looked like a triumph march to reelection ha suddenly become a co test. "We have an ele torate that wants t tear down the temple says Will Marshall the Progressive Polic Institute, a middle-o the-road Democrat think tank. Adds Dem cratic strategist Mik

LESSONS FROM THE MIDTERM VOTE

INSIDERS OUT In Pennsylvania, appointed Democratic Senator Harris Wofford trounced former Attorney General Dick Thornburgh with an "angry outsider" message that stressed economic issues and the need for national health care

THE RACIAL CARD Political neophyte Kirk Fordice defeated Mississippi's Democratic governor, Ray Mabus, by repeatedly invoking the q-word: quotas. Once again, racial politics served the GOP well

DEATH BY TAXES Republicans seized control of both houses of the New Jersey legislature by stoking antitax resentment toward Democratic Governor Jim Florio and his policies that tax the middle class to help the poor

TERMS AND CONDITIONS With a push from House Speaker Tom Foley, voters defeated an initiative that would have limited the service of House and Senate members from the state of Washington

DATA BW

Curry: "People aren't into marginal ering anymore. They want change, they want it now."

ne sudden sense of vulnerability has off hysteria in the Bush camp. A nering debate among Cabinet mem- over economic strategy has become ugly public fight, with Housing & an Development Secretary Jack F. np still agitating for stimulative leg- ion after Bush decided not to press issue this year.

es are blaming each r for the defeat of rnburgh, whom h had personally ned into the Senate . And meetings of h political advisers e become what one icipant describes as dozen guys sitting and screaming at other."

ven the ever pru- Bush has hit the ic button. He ned his own aides— embarrassed the anese government—by abruptly poning an important late-November n tour. The stated reason: Bush ts to keep an eye on Congress as it ps up the year. But lawmakers plan e gone before the scheduled start of Asia trip. Instead, the President will finishing touches on an economic kage, consisting mostly of a capital- s tax cut and other warmed-over posals, which he plans to offer after gress adjourns for the year.

ush seems to be ing for protection inst increasingly dent Democratic rges that he's too erned with foreign cy. But it's not clear an help himself by ntatiously staying ne. Presidential d-wringing only fo- es more public atten- on the problem e highlighting the inistration's inabil- to solve it.

RE HELL.' With little spect for fiscal stim- before next spring, the White se has turned up the heat on Feder- Reserve Chairman Alan Greenspan. Nov. 6, the Fed came through with a -percentage-point cut in the discount , to 4.5% (page 36). Bush advisers t more, and they won't be shy about ng for it. Senior aides believe the nomy must show convincing signs of rovement by spring or Bush will be erious trouble. "Alan Greenspan will determine the outcome of the next election," says Laurence Meyer, a St. Louis economic consultant. "He's all they've got at the White House."

For Democrats, the stagnant economy gives them an opening they could only dream about just a few months ago. Bush's crumbling legislative program already has emboldened Democratic lawmakers (page 57), and White House aides are bracing for what one calls "pure hell" on Capitol Hill next year as the campaign heats up. "There's going to be a contested Presidential race in 1992. We just confirmed it," says political consultant James Carville, who engineered Wofford's astounding come-from-behind victory in Pennsylvania. Top Bush campaign strategist Charles Black agrees: "If this economy stays bad, the President will have a close contest."

Still, Bush remains the favorite for next fall. For all his woes, the President retains a reserve of goodwill with the public—witness his approval ratings, hovering at about 60%. And while voters may chafe at his neglect of domestic problems, they don't yet see a credible alternative in the untested field of Democratic contenders. Moreover, the public blames a Democratic Congress as much as the Republican President for the economic malaise. "The message that 'I'm not George Bush' isn't enough," says Democratic strategist William Galston. "Democrats need a program for growth that makes sense to average voters."

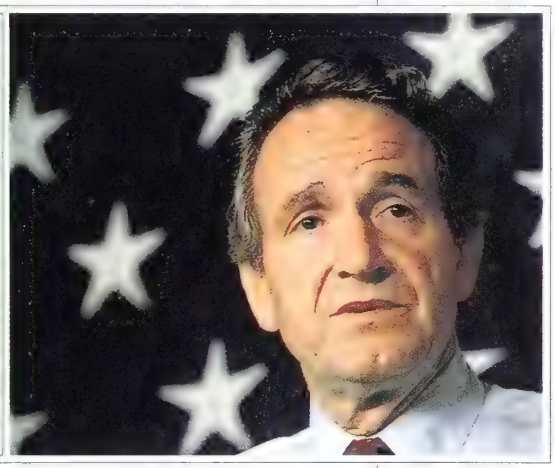
Out on the hustings, a field of six Democratic wannabes is test-marketing a variety of middle-class appeals. To tap voter rage, all style themselves as outsiders, bashing Washington and painting Bush as the defender of the status quo, out of touch with working Americans. "George Bush is the Herbert Hoover of the 1990s," says fiery populist Senator Tom Harkin (D-Iowa).

STILL TIME. But beyond the anti-Washington pose, there's little Democratic agreement on the most effective way to capsize Bush. Harkin calls for heavy new government spending on public works, national health insurance, research and development, education, child care programs, and transportation. His goal: providing long-term public and private investment to insure strong future growth. Other Democrats, such as Arkansas Governor Bill Clinton and Nebraska Senator Bob Kerrey, eschew big new spending programs, stressing a slimmed-down federal government and individual responsibility. "There will never be a government program for every problem," Clinton tells audiences. Kerrey has taken such rhetoric a step further, calling for a 50% reduction in Cabinet positions and sharp cuts in government spending. "We must begin by cleaning house in Washington," Kerrey says, echoing George Wallace's 1968 war cry.

The Democrats still have plenty of time to refine their message—and to build one of their no-name contenders into a credible challenger. If that doesn't work, New York Governor Mario M. Cuomo, whose aides were heartened by the liberal Wofford's trouncing of Thornburgh, could barge into the race. For George Bush, the nightmare of Election Day, 1991, is a forceful reminder that despite his triumphs abroad, Americans are increasingly impatient with politicians' inattention to problems at home. Unless the economy shows signs of life soon, next year's campaign is going to be tougher than Bush ever imagined.

By Douglas A. Harbrecht and Howard Gleckman in Washington

Teeter's polls show plunging public confidence in Bush's handling of the economy



Populist candidate Harkin depicts Bush as 'the Herbert Hoover of the 1990s'

POLITICS

'DUKE HAS TO BE STOPPED'

Louisiana executives from both parties are going all out for Edwards

DUKE ON THE STUMP: SOME WORKERS RESENT EMPLOYERS' ANTI-DUKE PRESSURE

Just days before Louisiana's Nov. 16 gubernatorial election, employees of Stewart Enterprises, a New Orleans-based funeral home and cemetery operator, will get an unusual memorandum from Chairman Frank B. Stewart Jr. It warns that the election of Republican David Duke, a 41-year-old former Ku Klux Klan leader and Nazi sympathizer, could cripple the fragile state economy. "The major financial institutions in this country . . . will probably blackball us merely because of the reputation (be it right or wrong) that David Duke brings with him," Stewart writes. The stark choice: Back former Democratic Governor Edwin W. Edwards, whose years in office were marred by corruption charges, or risk "economic suicide" at the hands of Duke.

As Louisiana's bizarre governor's race reaches its climax, appeals such as Stewart's are becoming more common. Kevin P. Reilly Sr., chairman of Lamar Corp., a big outdoor advertising company based in Baton Rouge, plans to give his 400 Louisiana workers a similar message next week. "Duke has to be stopped," he says. Adds Baton Rouge retailing executive Donna Sternberg: "With our history of leaving Germany in 1936, the Sternberg family is vividly aware of the consequences of letting a tyrant rise."

Louisiana executives have mounted one of the most intensive political drives in recent memory. Some, like Republicans Stewart and Reilly, are drafting employee letters or sponsoring Edwards fund-raisers. Others, such as French Quarter business leader David Dixon, are funding ads that depict Duke's crusade against big government, welfare chiselers, and affirmative-action hiring as racial and economic poison.

DUKE VS. EDWARDS: TOO CLOSE TO CALL

In polling Oct. 25-27, Louisiana voters expressed their preference for governor

EDWIN EDWARDS	46%
DAVID DUKE	42%
UNDECIDED	12%

DATA MASON DIXON OPINION RESEARCH

BUSH WHACK. With Duke now running neck and neck with Edwards (table), business is petrified. "The only businesses that would benefit if Duke wins," says James R. "Jim Bob" Moffett, CEO of minerals giant Freeport-McMoRan Inc., "would be airlines and U-Haul companies" carrying the fleeing hordes out of the stat President Bush seems to agree. On No 6, he added his voice to the anti-Du chorus, calling the renegade Republica "an insincere charlatan."

Fear of a Duke victory has led th Louisiana Council for Fiscal Reform, a umbrella group that Moffett heads, issue its first endorsement—for refor ers' nemesis Edwards. The ex-governo has also been endorsed by groups lawyers, manufacturers, and merchant Says Wiley McCormick, president of th New Orleans Tourism Marketing Cor "Tourism is a $3 billion industry her Duke's election would be a disaster."

Just how big a disaster is in disput The Edwards campaign is hyping th economic doom message in hopes of wi ning over the upscale, better-educate voters who detest Edwards. Accordin to University of New Orleans economis Timothy F. Ryan, a consultant to th anti-Duke coalition, a Duke victor might cost 45,000 jobs and $1.8 billion annual revenues. Edwards is hammerin hard at the job-loss issue. A recent T spot shows workers ambling past a pa locked plant gate while the voice-ov intones: "Unless Edwin Edwards elected governor, Louisiana's shak economy could collapse."

TOSS-UP. Actually, Louisiana has bee making a comeback from the 1980s bust. Although the state lost 150,0 jobs from 1981 to 1987, unemployment now 6.8%, about average. "Nobody e pects a company like Exxon to pull o its refinery under Duke," says James Richardson, a Louisiana State Universit economist. "But business worries abo future plant-siting decisions."

Business may have a more immedia problem handling a pro-Duke backlas "Melina"—she won't reveal her la name—is a Duke backer working at New Orleans energy company. She's u set about management's attempts to i fluence her vote. "I got a letter in n Monday pay envelope telling me, in e fect, I should not vote for Mr. Duke she says during a furtive phone call. was very offended. I wouldn't vote f Edwards if they threatened to kill me

Can business turn the tide again Duke? Most analysts say the race is toss-up, with Edwards' 28% share of th white vote below the 34% margin needs to win. Whatever the outcom though, business has cast its lot: Face with a choice between a discredited fo mer governor and a rabble-rouser wh only recently cast aside his bedshee business will rally behind Edwards. Say Bill Little, president of the Baton Roug Chamber of Commerce: "Given th choice, there is no other choice."

By Lee Walczak in New Orlea

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UNITED AIRLINES

FINANCIERS

KEVIN MAXWELL, 32, IS A FINANCE WHIZ WHO MAY SPEED PLANS TO SELL OFF U.S. BUSINESSES

THE TURMOIL THAT MAXWELL'S KIDS ARE INHERITING

Can this sprawling, debt-ridden empire survive its flamboyant boss?

Robert Maxwell gave editors of his newspapers the kind of story tabloid news hounds dream about: "Flamboyant Tycoon Dies in Mystery at Sea." But this time, the victim was Maxwell himself. Sometime in the early hours of Nov. 5, the 68-year-old British media baron vanished from his 180-foot motor yacht. His nude body was found floating later that day in the Atlantic Ocean near the Canary Islands. After a day of wild speculation about the circumstances of the death, an autopsy concluded that Maxwell died of natural causes, perhaps as a result of a heart attack, before falling overboard.

No less mysterious is the fate of the global empire Maxwell assembled in the five decades since he emigrated to Britain from his native Czechoslovakia. Can this tangled, debt-ridden empire survive its larger-than-life boss? It's no idle question: Like rival Rupert Murdoch, Maxwell borrowed huge sums to snap up everything from eminent book publisher Macmillan Inc. to New York's feisty *Daily News* tabloid.

By early this year, Maxwell was struggling under a crushing debt: $3.9 billion for his complex web of public and private companies. Making matters worse, the recession had sapped profits and eroded the value of his assets. So to stay ahead of bankers, Maxwell had been frantically selling off assets for several months.

Now, Maxwell's sons must sort out the mess. Kevin, 32, has been named chairman of Maxwell Communication Corp. (MCC) and publisher of the *Daily News*. Colleagues say Kevin is a savvy financial manager who served as Maxwell's principal contact with bankers. He'll need those skills: Flagship MCC, which controls Macmillan and other Maxwell properties, is saddled with $2.3 billion in debt. His older brother Ian, 35, will run Mirror Group Newspapers Ltd., the profitable and relatively debt-free company that controls Britain's *Daily Mirror*.

But no Maxwell property is really secure. That's because Maxwell has put up shares of MCC and Mirror Group as collateral for much of the $1.3 billion in loans taken out by his priva companies. As a result, MCC's earnin and share price are critical to the cr ditworthiness of other properties. Tl trouble is, MCC isn't earning enou from core operations to pay its own i terest, taxes, and dividends.

FEW OPTIONS. Other companies in su straits might cut their dividend. But an lysts say Maxwell couldn't afford tha His family controls 68% of MCC's share and one observer believes Maxwell nee ed the dividend to pay interest on h private debt. What's more, say analyst Maxwell has had to maintain an unus ally generous dividend to prop up th price of MCC shares. If the price drop too much, banks can demand more co lateral, further increasing pressure o the empire. MCC shares, which were a ready sinking, plunged 13%, to $2.13, o Nov. 5—before trading was halted.

So Maxwell has left his sons with fe options. Family bankers and advise say the brothers will continue to se assets. They may have some breathin room, since a $750 million debt payme isn't due until October, 1992, with a fu ther $1.25 billion due two years late But MCC execs say Maxwell's much-ba lyhooed plan to raise cash by spinnin off U. S. assets into a new public comp ny has been shelved. One admits th plan "was made up on the fly."

Instead, Kevin Maxwell will probab speed plans to sell chunks of the U. business outright. Chairman Willia Reilly, of K-III Holdings, says he talke to Maxwell several weeks ago abou buying MCC's 56% stake in Berlitz, a la guage and travel book publisher. Reil says they didn't agree on price, but h believes many Maxwell properties are o the block. The future of the *Daily New* is unclear: It actually broke even three recent weeks and has made circ lation gains. But analysts say it cou still lose $40 million this yea

Even with the sales, it not clear that MCC will h able to pay off all its deb With Maxwell out of the pi ture, bankers say his de may have to be restructure Kevin Maxwell says h hasn't discussed any ref nancing with the banks. If restructuring is done prope ly, Maxwell's empire cou emerge as a smaller bu sounder business. But seems unlikely to remain or of the world's biggest med empires. That dream die even before Robert Maxwel

By Mark Maremont i London, with Mark Landler i New York

ROBERT MAXWELL AT THE *DAILY NEWS*

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HEALTH CARE

ALREADY, BIG BUSINESS' HEALTH PLAN ISN'T FEELING SO HOT

Costs and the specter of regulation are making supporters queasy

SOCAL EDISON'S SOKOLOV (TOP) IS SOLD ON THE PLAN, BUT SMALL-BUSINESS REP MOTLEY SAYS IT DOESN'T SUIT MOST BUSINESS OWNERS' NEEDS

Some of Corporate America's biggest names have been quietly working on a national health insurance proposal that would make most capitalists blanch. On Nov. 12, the National Leadership Coalition for Health Care Reform is expected to endorse a plan that calls for more taxes, government price controls, and mandatory coverage of workers. But chances that big business will unite behind the plan seem to be slipping. As announcement day approaches, some corporations are becoming queasy—and quitting the coalition.

Few executives deny the health care system needs fixing. And the central role that Pennsylvania Democrat Harris Wofford's advocacy of national health insurance played in his Nov. 5 election to the Senate has raised the issue's political profile. But the split in the coalition underscores business' ambivalence. Big companies are divided over what role government should play in controlling costs and expanding coverage. Small business opposes any proposal that includes mandated coverage. The coalition, says John J. Motley III, a National Federation of Independent Business lobbyist, "does not represent the thinking of the vast majority of business owners."

The National Leadership Coalition, comprising about 60 large companies, unions, and special interest groups, began working toward a comprehensive proposal in March, 1990. The goal was a plan that would provide all Americans with health coverage and contain costs. Members included such notables as Xerox, Lockheed, Southwestern Bell, and General Electric.

HERETICAL. According to a draft report obtained by BUSINESS WEEK, the coalition will recommend that all employers either provide coverage to their workers or contribute to a payroll tax that would finance a public health plan called Pro-Health. The plan would cover everybody with a minimum package of benefits. Annual premiums per family would start at an estimated $3,720. Companies choosing to cover their employees would pay at least 80% of the premiums. Companies choosing not to join would pay Pro-Health a tax of 7% of their payroll, with workers chipping in an additional 1.75% of pay. The government would subsidize low- and moderate-income peopl

If that's not heretical enough for bus ness, the plan also calls for uniform fe for physician and hospital services. Thi along with the employer mandate, wou end what's known as "cost shifting" b doctors and hospitals. Hospitals could n longer levy higher fees on insured wealthy patients to make up for low fees required by medicare and medica and for the free care given to patien without insurance. "There's no oth way to guard against cost shifting tha by regulation," says Chrysler Corp. lo byist Walter B. Maher, a plan supporte "You can't do it with scout's honor."

Chrysler, Ford, and Bethlehem Steel— all unionized companies with staggerin health care costs—are the big move behind the plan. Others, such as Sout ern California Edison and Dayton Hu son, also have signed on. "It's the fir business effort to put together som thing that is far-ranging," says SoC Edison Vice-President Jacque J. Sokolo

DROPOUTS. That's exactly what scar some corporations. AT&T, Du Pont, Arc Eastman Kodak, 3M, and Burger Kin have all dropped out of th coalition. They can't stomac such a large dollop of regul tion. "Maybe someday w can look at prices and ma dates, but we have not e hausted all of the less radic solutions yet," says David Helms, senior benefits co sultant at Du Pont Co.

Although the coalitio won't present a united corp rate front, its recommend tions are sure to be taken s riously on Capitol Hill next year. Sena Majority Leader George J. Mitchell (D Me.) already has introduced a similar b to mandate insurance.

Small-business opposition will be hurdle to all but the most modest actio Nearly 300 companies and groups repr senting small businesses have create their own coalition, the Healthcare Equ ty Action League, to fight any attem to require employers to provide cove age. Small companies want action limi ed to reforms that would make it easi for them to buy group health coverag

The gap between big corporations ar small business will be tough to bridg Organizers of the National Leadersh Coalition had hoped they at least cou present a broad front of large corpor tions behind a single plan. That dream fading. The political debate over healt care is sure to intensify next year. U less business finds a way to push a ur fied approach, it may miss its be chance to shape the outcome.

By Susan B. Garland in Washingto

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AIRLINES

A ROUGHER ATLANTIC CROSSING THAN DELTA BARGAINED FOR

Picking up Pan Am's routes is costing a bundle—and scaring Wall Street

It was all in good fun. But the symbolism was apt on Nov. 1, when Delta Air Lines Inc. President W. Whitley Hawkins cut the ribbon to inaugurate the new European service Delta recently bought from Pan Am Corp. Just as Hawkins snipped the huge red ribbon wrapped around an Airbus jet, the wind whipped across the tarmac at New York's John F. Kennedy International Airport. As an oversized bow toppled over on the assembled officials, their startled expressions spoke volumes: Is nothing easy about expanding overseas?

Wall Street doesn't think so. While nobody doubts the Atlanta-based carrier's global potential, its expansion is turning out to be more expensive than anyone imagined. To buy Pan Am's European routes and its Northeast shuttle, Delta agreed in August to fund ongoing Pan Am losses and capitalize a new Pan Am reorganized to focus on Latin America. With that carrier burning through $2.5 million in cash per day, Delta has already had to pump in $105 million more than expected.

DEAD OF WINTER. That's giving analysts the shivers. On Nov. 5, Helane Becker of Shearson Lehman Brothers Inc. reduced her buy recommendation on Delta's stock to a hold, helping drive the stock below 61 from 70 on Oct. 16. Both Standard & Poor's Corp. and Moody's Investors Service Inc. have downgraded the carrier's debt.

Is Wall Street suffering another case of myopia? Yes and no. Given that rivals United Airlines Inc. and American Airlines Inc. are themselves expanding headlong overseas, Delta had little choice but to bite when the Pan Am routes became available. Pan Am's European system—lacking a steady feed of domestic traffic and fraught with inefficiencies—has long lost money. But as Delta Chairman Ronald W. Allen said in August: "Give Delta a chance, O. K."?

But what will it cost? Consider first that Delta is starting up its new European service in the dead of winter, when traffic always slows to a trickle, even in strong economic times. Moreover, as its revenues stall, Delta is taking on big new costs, such as training 7,000 Pan Am employees. Even Thomas J. Roeck Jr., Delta's senior vice-president for finance, admits that the European routes won't spin off profits until next summer.

While Europe eventually will turn around, however, Delta's ongoing exposure to Pan Am is more troublesome. Drawn into a bidding war for the company with Carl Icahn's Trans World Airlines Inc., Delta assumed many more obligations than it wanted to. And that's hurting already.

Here's an example. As part of the original deal, Delta agreed to fund as much as $100 million in Pan Am losses under certain conditions before Dec. 3, when the airline is scheduled to emerge from Chapter 11. But because Pan Am was chewing through cash so voraciously, Delta forced Pan Am's creditors to accept a new deal on Oct. 22. Delta agreed to provide $140 million in cash for Pan Am until Dec. 3. Assuming the cash is all used, $50 million of it will become debt owed to Delta by the post-Chapter 11 Pan Am. An additional $40 million will be paid back on Dec.

In any event, Delta will still have clos ties to Pan Am. To capitalize the ne company, Delta has agreed to pay $5 million for 45% of Pan Am's equity an will provide a $100 million credit line. will also hold notes from Pan Am fo $205 million, which, as part of the ren gotiated deal, will sport an interest rat boosted from 10% to 15%. Delta's tot exposure to Pan Am is about $1 billio $726 million of it cash.

TALL ORDER. Pan Am's creditors, howe er, are already complaining that the ne deal adds $33 million to the carrier's a nual costs, and have asked Delta to co sider extracting less through interes and fees. The creditors will own 55% the new Pan Am's equity, and they sa the payments to Delta are clouding Pa Am's outlook.

Ultimately, though, the new Pan A has to flourish for Delta to look smar That's a tall order. Beset with stiff com petition from American, which bough the Latin American system of Easter Air Lines Inc. in 1989, Pan Am's traffi in the region has been falling dramat cally during its turmoil. New Pan A President Russell L. Ray Jr. says a re vamped ad campaign and passenger transferring from Delta flights wi boost traffic considerably next year. Bu projections—which concede $87.6 millio in losses next year—assume that Pa Am will do more business on the route than it has in far better economic times

There's little sign that prosperity i right around the corner. Buying thos European routes was the right move fo Delta. But the cost of its ambition i proving to be steep indeed.

By Michael Oneal in New York, wit Chuck Hawkins in Atlanta and Gai DeGeorge in Miami

LAUNCHING DELTA'S NEW SERVICE TO EUROPE: EVEN THE RIBBON-CUTTING CEREMONY SEEMED JINXED

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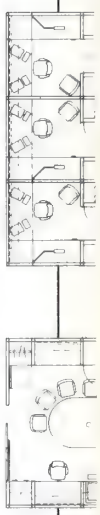
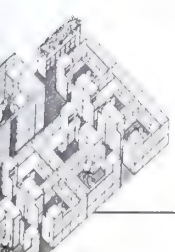




WANG **OFFICES THAT WORK**

In Business This Week

EDITED BY HARRIS COLLINGWOOD

WHICH NAMES MEAN QUALITY?

Accountants Grant Thornton recently asked 250 American executives: "When you think of U.S. manufacturers with top quality standards, which one company comes to mind?" Listed below are those most frequently mentioned. One word of caution, though: "None" got more mentions than IBM did

DATA: GRANT THORNTON SURVEY OF AMERICAN MANUFACTURERS

WEDDING PLANS FOR BA AND KLM

▶ The next blockbuster airline deal could happen in Europe. According to a high official at a major U.S. airline, British Airways and the Netherlands' KLM are set to notify European Community antitrust authorities on Nov. 12 that they plan to merge. Both companies have been lobbying the 17-member commission, and at this point, they appear to have nine votes. Even if the EC frowns on the deal, BA and KLM may still agree to cooperate closely.

A merger would create a carrier with a large U.S. presence. Assuming that BA and KLM end up with equity in Northwest and Continental, the combined BA-KLM would have hubs in Minneapolis, Detroit, and Newark.

DEC AND MICROSOFT DO WINDOWS

▶ While they won't go as far as IBM and Apple Computer have, Microsoft and Digital Equipment are cozying up. On Nov. 18, the computer maker and the software giant are expected to unveil important new software for Microsoft's popular Windows graphics system, say sources close to both companies.

Specifically, DEC is expected to introduce a Windows version of its All-in-1 office software, which combines electronic mail, graphics, word processing, and calendar programs. In addition, DEC plans to incorporate Windows into its latest high-powered personal computers. Overall, the deal should strengthen both companies against IBM.

THE FLY THAT'S EATING CALIFORNIA

▶ California's $18 billion farm sector, already beset by drought and a lackluster economy, faces another crippling foe. The poinsettia whitefly, a two-millimeter-long pest that threatens to do more damage than even the state's notorious medfly, is already munching its way through the Imperial Valley. And as known pesticides prove useless against it, the voracious bug is spreading northward from the state's southern border. California officials worry that the insect will soon land in the vast San Joaquin Valley, the state's agricultural center.

Figuring that the whitefly will return to Imperial County next summer, farmers are talking about cutting off all irrigation. They might be willing to lose a year's crops if they could kill off the bug.

THEY DON'T SHOOT HORSES, DO THEY?

It's not easy having a social conscience in Hollywood. Case in point: Richard Donner, director of the two *Lethal Weapon* blockbusters for Warner Bros. Just before he started the cameras rolling on *Lethal Weapon* III—like its predecessors a blood-splattered buddy flick—animal-rights activist Donner learned that General Motors routinely kills small animals as part of its safety-testing program. The director promptly banned the use of any GM cars in his movie.

GM then pointed out to the *auteur* that Ford and Chrysler share data from GM's bunny-smashing research. "That left us with the prospect of only using foreign cars," says Donner's press agent. Donner backed down and will use GM autos. But he's hardly happy. "We still intend to make our views known on the subject," says the spokesman. Does that mean Mel Gibson might blow away a lab technician in the next sequel?

FIRST EXECUTIVE IS STILL UP FOR GRABS

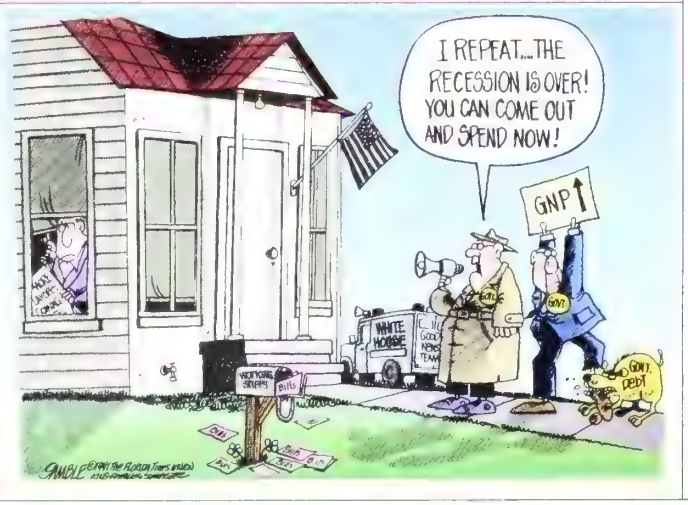
▶ The First Executive saga continues. After a two-week struggle to line up industry backers, an organization representing state insurance guaranty funds has lost out in its bid for the failed life insurer. At a Nov. 6 press conference, California Insurance Commissioner John Garamendi dismissed the organization's offer, which was backed by a $1 billion line of credit amassed by 20 large insurers. Garamendi maintained that the capital could not safely cover First Executive's liabilities.

Garamendi's action could attract sweetened offers from French insurer Altus Finance and San Francisco investment bankers Hellman & Friedman. Both bid previously and have until Nov. 11 to file new offers with Garamendi.

IBM IS GUILTY OF AGE DISCRIMINATION

▶ IBM dodged a bullet when a federal jury on Nov. 6 refused to award punitive damages to a former systems engineer who charged that the company had forced him to take early retirement in 1987. But two days earlier, the same jury in U.S. District Court in Trenton, N.J., found IBM guilty of age discrimination and awarded the engineer, Richard Rathemacher, $315,000 in back pay.

Rathemacher claimed that he signed up for an early retirement plan only after IBM stripped him of his title and duties. IBM insists it treated Rathemacher "fairly" and is mulling whether to appeal the discrimination verdict.



TOP TO BOTTOM: ILLUSTRATION BY ROBERT ZIMMERMAN; ARTWORK BY GAMBLE, THE FLORIDA TIMES-UNION

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Although specific coverage may vary from state to state, most basic life and health insurance policies and annuities are covered by the guaranty associations. They have the resources to help make sure basic policyholder benefits are secure. Naturally, coverage for some products purchased by more sophisticated investors is generally less comprehensive.

The fact that life insurers have to help pay for the mistakes of other companies gives them a powerful incentive to maintain the financial strength of the industry. And in the few cases where a company does get in serious financial difficulty, regulators often take control while the company can still meet its liabilities.

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THE POWER IS ON

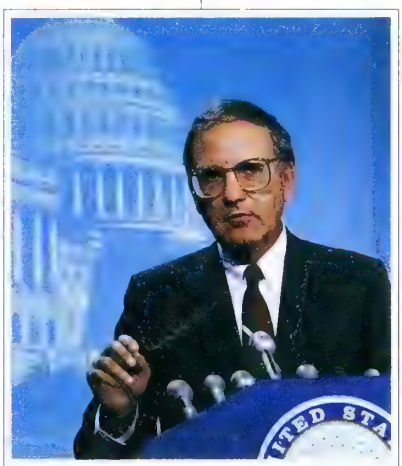
EDITED BY STEPHEN H. WILDSTROM

'CHEAP SHOTS AND CHEAP TALK': CONGRESS WRAPS UP A YEAR TO FORGET

Congress usually closes its year in a burst of activity, ending months of quarrelsome dawdling with a rush to wrap up unfinished business. But as lawmakers head for e-Thanksgiving adjournment, they are looking toward an tisfying end to an ugly and unproductive session.

aving locked themselves into a fiscal straitjacket with the budget agreement, Democratic leaders and President had talked of putting aside partisan differences to take ig tasks: modernize creaky laws regulating financial ser-, revamp energy policy and transporta- programs, and grapple with reform of h care and education. But the glow d quickly as the parties went for the partisan thrust. Carleton College po- l scientist Steven E. Schier says Con- s fell all over itself with "cheap shots cheap talk. On most issues, the mem- battled themselves to a draw."

KSLAPPING. Democrats are congratulat- hemselves for recent victories over the inistration. A yearlong effort by Trea- Secretary Nicholas F. Brady to give s broad new powers went down in es in the House on Nov. 4 (page 122). servation-minded Senate Democrats ked consideration of an energy bill mod- on the President's strategy. After two s of vicious combat, Democrats won ptance of civil rights legislation that closely resembles the sure Bush had denounced as a "quota bill." They forced White House to seek compromise over added benefits for long-term unemployed. And Senate Majority Leader rge J. Mitchell (D-Me.), perhaps the Democrats' most effec- strategist, kept Bush's capital-gains tax cut bottled up. r his part, the President extended his string of successful es to 23. He began the year with a major victory, when gress narrowly voted to authorize the use of force in the ian Gulf. And the Bush Administration overcame obsta-



SENATE MAJORITY LEADER MITCHELL

cles to get two embattled nominees confirmed: Clarence Thomas to the Supreme Court and Robert M. Gates as director of central intelligence.

But these partisan triumphs for either side ring hollow. As members head home until January, they shouldn't expect kudos for scoring points on bank reform. More likely, voters will wonder what happened to talk of a middle-class tax cut, promises to make health care more affordable, or solemn oaths to clean up the way campaigns are financed. Debate over crime and drugs—two of the issues that matter most to voters—is endless, but the problems only get worse. "There's a mismatch between the short-term focus of Congress and the long-term problems facing the country," laments Representative Willis D. Gradison (R-Ohio).

EMPTY PROMISES. Even so mundane an issue as renewal of the highway and mass-transit programs has gotten bogged down in disputes between the House and Senate and probably won't be completed until next year. And the big promise of 1991—that the budget agreement would cut the deficit—also turned out to be empty. Thomas E. Mann of the Brookings Institution says voters "are very receptive to criticism of Congress as an institution when they see deficits growing and their own wages falling."

Lawmakers will wind up the session by taking care of some essential business—infusing capital into the Bank Insurance Fund and the thrift cleanup and passing a handful of spending bills. And the year wouldn't be complete without one more wrenching debate over abortion, this time on a bill allowing family-planning clinics to counsel patients on ending pregnancies. What voters are likely to remember, though, is the Senate's midnight pay raise and the House's bounced checks. Members can only be grateful that elections aren't until 1992.

By Paula Dwyer

ITAL WRAPUP

ALTH

he White House is beginning to take health care seriously as a po- al challenge. Some strategists, urg- a wait-and-see approach, had hoped put off presenting an Administra- n plan until after the 1992 election. t with Democrats scoring points on issue, Budget Director Richard G. rman is arguing that President sh should be ready to trot out his n plan during the upcoming cam- gn. Now all he needs is a proposal. rman is working with Wharton hool economist Mark V. Pauly to ft one. Pauly favors a tax-based ap- ach: Individuals, not employers, would be required to buy insurance. But low- and middle-income families would get a tax credit for their payments—and a check from the government if the cost exceeded their tax bill.

PEOPLE

Admiral Jonathan T. Howe is the front-runner for the No. 2 job at the National Security Council, vacated when Robert M. Gates was confirmed as director of central intelligence on Nov. 5. Howe, 56, is commander-in-chief of U.S. naval forces in Europe and once served as a military aide to Henry A. Kissinger at the NSC and as director of political and military affairs at the State Dept.

CIVIL RIGHTS

Business is already unhappy with compromise civil rights legislation now rushing through Congress. But worse may lie ahead. Large employers, fearing a wave of lawsuits, feel that the proposed $300,000 cap on damages for victims of sexual discrimination is too high. But only a last-minute deal in the Senate prevented a move to eliminate the caps entirely. Senator Tim Wirth (D-Colo.) agreed to hold off on an amendment supported by women's groups. In exchange, Senate Majority Leader George J. Mitchell promised a separate vote next year on legislation lifting the ceiling.

TRIPPLETT, SIPA

JAPAN

THE "FEV," OR FUTURE ELECTRIC VEHICLE: NISSAN IS INVESTING HEAVILY TO GET THIS PROTOTYPE TO MARKET WITHIN FOUR TO FIVE YEARS

JAPAN IS CUTTING BACK, BUT NOT ALONG THE CUTTING EDGE

While the days of easy money are gone, companies still keep the yen flowing to product developmer

Atsushi Muramatsu is finding it hard keeping his colleagues off his back. As Nissan Motor Co.'s finance director, his job is to wade through capital spending requests and keep this year's budget at $2 billion, down 18% from last year. "I'm trying to stall everyone," he says, especially those asking for things such as new office air-conditioning and remodeling.

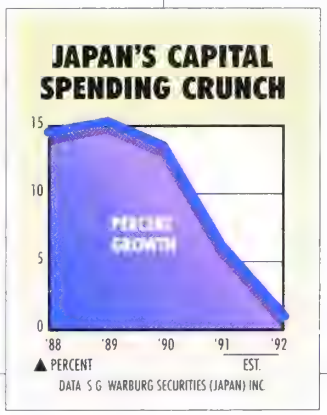
But Nissan is far from stingy when it comes to seeking future business. "We will defer some capital investment but not when it comes to product development or environment-related technology," says Nissan President Yutaka Kume. For example, he is charging up investment in electric-car and battery research, including the FEV, or future electric vehicle, on display at the Tokyo International Motor Show this month. He hopes the FEV will be on the market within four to five years.

Across Japan, executives are making the same tough decisions. After several years of fat increases in capital spending, they are now headed for a second year of leaner times (chart). An economic slowdown and tight money are forcing corporations to become increasingly selective about how they use their money.

'KNOCKDOWN PRICES.' But from autos to electronics, Japanese companies are continuing to funnel resources toward creating new products. The goal: to come out of the slump as competitive as ever with snazzy devices such as Nissan's fingerprint-reading systems that lock and unlock car doors by reading registered prints. The likely outcome is that U. S. rivals will be hard-pressed to keep up with the Japanese. "They'll be back on the attack with knockout new products at knockdown new prices," says Kenneth S. Courtis, economist with Deutsche Bank in Tokyo.

The electronics industry is putting its money where it matters most—in cutting-edge technology. Although Toshiba Corp.'s profits sank 62% in the fir half, the company is moving ahead wi major investments in advanced integra ed circuits. Of the $480 million th Toshiba has earmarked for new researc and development equipment and th $2.15 billion set aside for R&D program this year, a major chunk will go towa the new chips. Toshiba engineers a now designing memory cells for a sti theoretical one-gigabit memory chip, device that will hold a billion pieces o information. The target date to hit th market: the year 2000.

Fujitsu Ltd. may hav posted a 31.5% profit d cline for the fiscal hal year ended Sept. 30, b it's plowing ahead wit new technologies, too. recently opened a $2 million production line t make integrated circui out of gallium arsenide, new material that is fas er and more energy-eff cient than silicon. An



non Inc. will keep pumping money
o new flat-panel display screens to be
ed in desktop publishing by next year.
To keep the funds flowing into prod-
development, Toshiba, Hitachi, NEC,
d other chipmakers are tightening
ir belts in other areas. The industry
carried away in the easy-money days
the 1980s. Now, it's stuck with excess
pacity. Companies poured money into
oduction lines for 4-megabit DRAM
ps, but a poor market for personal
nputers overseas is keeping demand
, and prices have sunk 33%, to about
per chip since April. Hitachi Ltd. cut
s year's capital spending on integrat-
circuits by 18%, to $692 million. To-
ba is delaying the opening of a $770
lion plant for 4- and 16-megabit DRAM
ps in central Japan by at least six
nths. And analysts say Mitsubishi
ctric Corp. will be forced to delay
rting up the second 4-megabit line at
new Saijo plant.

ADY ROBOTS. After years of investing
ge sums in new equipment, many
npanies now hope to ride out the
rm. Sony Corp. hints that it will soon
its $3.4 billion capital spending bud-
by 10% to 20% for next year. But
en with less new investment than in
past, "they can coast for three to
r years on what they've got," says
ris Pasterik, an analyst with Barclays
Zoete Wedd Securities (Japan).
Similarly, most auto and electric ma-
nery companies have highly automat-
plants and facilities. "The best robots
in place and ready," says Jesper
ll, economist with S. G. Warburg Se-
rities (Japan) Inc. Despite a six-month
mp in auto sales, Toyota and Nissan
l both open assembly plants next
ring in Kyushu. Mazda is completing a
v factory near Hiroshima. "We've fin-
ed the capacity spending we need,"
rs Takashi Matsuda, managing fi-
nce director for Honda. His company
capital spending by 22%.
Bucking the trend, many large-scale
ailers are boosting their spending. Ni-
i Co., a major supermarket chain,
ked up this year's capital expenditure
ns 22% over their original forecast of
54 million. Buoyed by recent moves
vard deregulation, retail chains are
panding: They're buying and leasing
operty, building new stores, and even
tomating. To keep up with demand,
pan's nine electric power companies
l also spend a record $31 billion to
grade and build plants next year.
There's no question that overall busi-
ss-investment growth rates will wal-
v for another year or so. But to as-
me they'll stay there, notes Warburg's
ll, "is silly." Even while spending is
wn, Japanese companies are busy
arpening their edge.

By Karen Lowry Miller in Tokyo

RUSSIA

WHAT'S A NICE REAL ESTATE BOOM DOING IN A PLACE LIKE MOSCOW?

In one of the few games in town, apartment and office prices soar

Moscow, of all places, has suddenly become one of the world's hottest real estate markets. As inflation soars and the ruble crumbles, Russians are looking to real estate to cushion the blow. It's a tricky game because of confusing property laws, but demand is growing, particularly from Western companies desperate for offices and apartments. Says Andrei A. Stroyev, chairman of Perestroika JV, a three-year-old construction venture: "There's a huge market just beginning."

Prices tell the story. Apartments bought a year ago in private deals for 20,000 rubles—about $350 at black-market rates—now go for $20,000. Coveted one- or two-bedroom apartments in central Moscow sell for as much as $50,000. In the six months since the Moscow City Council began holding property auctions, prices have soared as high as 5.5 million rubles—or about $100,000 at black market rates—for a three-room apartment. Konstantin Davidov, manager of Nest International Ltd., a new Moscow real estate brokerage, says apartment rents may soon rival New York's.

LEASE SHOCK. Commercial rents already do. In the past year, Perestroika JV has raised its average office rental fee from $65 to $85 a square foot—more than triple the New York rate. RealInvest MMI, owned by Chicago's Hugh McCaffery and the joint venture Dialog, says rents climb almost daily at the offices it leases from the Moscow City Council and renovated. Even McDonald's Corp. is betting on a boom in Moscow property. It has plowed big ruble profits from its two-year-old Pushkin Square restaurant into a brand-new 12-story downtown office building that has already been 60% leased to dollar-paying foreigners.

Fueling the residential market is the increase in emigration. Despite a taboo on holding land, apartment ownership has been allowed for years. But since émigrés may only take with them a tiny sum of hard currency, they beat the system by selling their apartments to foreigners and arranging to have hard currency deposited in foreign accounts.

The market explosion recently got an extra boost when Moscow began allowing residents to assume ownership of the state apartments in which they live. Now, many retirees are moving in with their children so that they can sell or rent their apartments for cash, most of it dollars from the booming black market. Others, such as a 32-year-old actress who earns 250 rubles a month, are snapping up second apartments with their savings to rent out for extra revenue. "I need to find a way to make money so I can feed my son," she says.

Like real estate everywhere, the Moscow market has its seamy side. Some Muscovites are showing signs of racism, demanding that dark-skinned Armenians or Azerbaijanis be prevented by law from speculating in Moscow real estate. Shady types are working scams, such as charging big sums just to show a flat. One way or another, Muscovites are showing they can hold their own in one of capitalism's toughest arenas.

By Rose Brady and Deborah Stead in Moscow

NIKOLAI IGNATIEV/NETWORK/MATRIX

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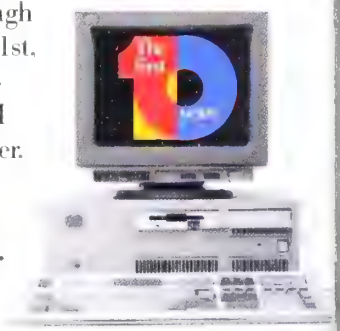

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IBM

EDITED BY STANLEY REED

AN JOHN MAJOR KEEP PLAYING OTH SIDES OF THE CHANNEL?

n late November, a year after Margaret Thatcher's shocking resignation as Prime Minister, her successor, John Major, will give an address in the House of Commons that ld seal his own political fate. At the end of a two-day ate on Britain's role in Europe—a subject that helped bring rn the Iron Lady—Major is expected to spell out his personision of British relations with the Continent.

o far. Major's smooth negotiating has mollified his Europecounterparts and his Conservative Party eagues at home. But with a crucial Euron summit looming on Dec. 9-10 at Maasht in the Netherlands, and an unofficial tion campaign under way, he faces dauntchallenges. At issue is not just whether tain becomes a fully paid-up member of rope—too complex a question for most vot—but also whether Major can exert firm trol over his own party and avoid a fatal . "The government must lead on this," s pro-European Tory MP Hugh Dykes, who sn't think Major can afford to dance und the question anymore.

ides say Major may burnish his European dentials by agreeing to a treaty on mone- union that commits Britain to a single ropean currency and central bank later in decade. But he will provide a sop to die- Thatcherites by insisting on an escape se requiring Parliament's endorsement.

HE NEEDS TORY AND EC APPROVAL

ISING BATTLE. Major faces a much tougher dilemma in ding how to act on a controversial European political trea- This package would give European institutions in Brussels r greater say on labor relations and environmental regula- s in Britain, as well as in defense and foreign policy. Major seek a compromise that will give these Eurogroups more er—but within strict limits, insiders say.

n this way, he hopes he can carry along Thatcher, who is ected to inveigh against too tight a union in the upcoming Commons debate. But if he fails, he risks both a bruising internecine battle in his party and a wider gulf opening up between Britain and the Continent. Ultimately, it could mean that France, Germany, and other Continental players go their own course toward a deeper form of integration, leaving Britain an also-ran in Europe.

Deft handling of the hot Europe question is crucial for Major, because he is being saddled with several highly unpopular Thatcher legacies—among them the botched reforms of the health system and sell-offs of state industries. With a close eye on a general election, which must be called by next June, the Tories' once-tightfisted financial management is giving way to steep spending increases to try to lift the country out of recession and win votes. On Nov. 6, Chancellor of the Exchequer Norman Lamont announced a $37 billion spending increase for the coming fiscal year, doubling the deficit, to $35 billion. There is, however, some concern that these measures will undo British efforts to bring its inflation in line with other EC members.

While the first glimpses of recovery can already be seen, unemployment, now at 8.6%, continues to rise, and any bounceback from the 2% decline in gross national product this year is likely to be slight. In addition, the banks, staggering under bad loans, may be unable to finance a strong recovery.

But the latest polls show that Major still has a good shot at winning his first general election—if he can survive the next couple of months of jawing over Europe. The key, says Tory loyalist Sir Marcus Fox, is having favorable economic results to show the electorate soon. While he is doing that, Major will have to find a position on Europe that doesn't split his party—or deal Britain out of Europe's future.

By Richard A. Melcher in London

OBAL WRAPUP

JROPE

Over the years, Airbus Industrie has taken plenty of flak from S. rivals such as Boeing Co. Now, s shooting back. Miffed that British rways PLC buys only American anes, Airbus is charging illegal sales ctics and has demanded a European mmunity probe. Airbus claims BA t a disguised rebate from engine ilder General Electric Co. on an Aust order of Boeing 777s. Yet Airbus ys that GE, in cahoots with Boeing, fused discounts on engines for Air-s. Airbus may be trying to muddy ashington's marathon talks with the on limiting Airbus' government funding. EC bureaucrats are skeptical, saying it will be tough for Airbus to prove the charges.

CHINA

While President Bush has canceled his Asian tour, Secretary of State James A. Baker III is making an important trip to China on Nov. 15-17. The goal: to keep deteriorating U. S.-Chinese relations from getting out of control. China is likely to try to placate the U. S. by signing the nuclear nonproliferation treaty and by releasing some dissidents. The Administration will probably slap China with sanctions for violating copyrights and patents, as part of a deal with Congress that would retain China's most-favored-nation trading privileges.

SOVIET UNION

The long-elusive goal of a ruble that can be freely traded for foreign currency may be coming sooner rather than later. Russian President Boris N. Yeltsin may soon sign a decree that would peg the ruble to free-market exchange rates. On Nov. 4, the Soviet state bank increased the tourist rate from 32 to 47 rubles to the dollar. That brings the ruble closer to the 50-to-60 range it fetches on Moscow's black market. A 2-cent convertible ruble would be a major step toward bringing the Soviets into the world economy.

RICHARD BAKER + ATZ/SABA

RESEARCH

'BRAIN REPAIR IS POSSIBLE'

Cellular techniques show promise in treating dread diseases

For years, Faye Day had been slipping into the nightmare of Parkinson's disease. The degenerative brain affliction, which causes difficulty in controlling movement, forced Day to leave her secretarial job three years ago. By early this year, "I was staggering and falling several times a day," recalls the 64-year-old resident of Valhermoso Springs, Ala. But in July, researchers at the University of Colorado injected brain cells from an aborted fetus into a dozen areas of Day's brain. Within weeks, the scientists believe, the new cells began churning out dopamine, a key brain chemical that is missing as a result of the disease. Now, she walks with little fear of falling. "Even if the treatment doesn't help any more than it has, it has been worth it," she says.

Day's encouraging progress presages a new era in medicine, when doctors can tackle some of the most intractable diseases of the brain, from the tremors of Parkinson's to the living death of Alzheimer's. The fetal cell transplants that Day received are just the beginning. But experiments with fetal tissue have been caught up in the politics of abortion, and the White House has banned federal funding for such work. That's one reason scientists are trying more exotic but less controversial approaches, including cell cultures and gene therapy. "We've seen extraordinary progress in the lab," says John R. Sladek, director of the Neuroscience Institute at the Chicago Medical School.

In fact, researchers plan to report an array of significant advances at the Society for Neuroscience meeting in New Orleans beginning on Nov. 10. Scientists will describe new methods for growing large amounts of fetal brain cells in the lab. They will also show how genetically altered cells, and genes themselves, can be injected into brains to combat or reverse damage caused by degenerative diseases. "We are showing that brain repair is possible," says Harvard medical school neuroscientist Ole Isacson.

NO DRUGS. These new approaches—whether transplanting fetal brain cells or inserting a gene—rely on the same basic strategy. They use living tissue, instead of drugs, to supply chemicals crucial to the functioning of brain cells impaired by disease. In Parkinson's, neurons that make a substance called dopamine start to degenerate. Without dopamine, scientists think, other brain cells are damaged, producing progressive loss of function. The obvious defense is to supply the missing dopamine. But drug eventually fail because too many ne rons that process dopamine are lost a the disease progresses. Hence the allur of fetal tissue. Scientists believe embry onic brain cells can grow to replace dam aged dopamine-producing neurons an those harmed by lack of the substance

So far, researchers around the worl have injected fetal cells into scores o Parkinson's patients such as Faye Da But no patient has yet come close to fu recovery, and many major unknowns re main, such as how long the implante cells will survive or whether they will b rejected. "Even if the procedure is suc cessful in the short term, we don't kno if the effect will wear off," says Dr. E Eugene Redmond Jr. at Yale University

As a result, some scientists argue tha such tissue transplants are only a stop gap until more sophisticated alternative can work. Physicians may one day b able to insert genetically engineere cells that produce precise amounts o dopamine or substances that may pre vent a patient's own cells from dying. A the University of California at San Die go, neuroscientist Fred H. Gage use such gene-splicing and transplants to re store the ability of rats t learn and remember. He iden tified aged rats with memor losses. Into some of the rat he implanted cells that wer engineered to make the chem cal, nerve growth factor. H wanted to see if the chemica could reverse the natural de generation of neurons. I worked, enabling the treate rats to remember how to nego tiate a simple water maze.

While it may be a half doze years before Gage's tech niques can begin to tackle hu man scourges such as Parkin son's and Alzheimer's, othe scientists are trying for speed er payoffs. Dr. Patrick Ae bischer of Brown Universit has developed a way to encap sulate small clumps of cell that produce the desired chem icals. Holes in the plastic cap sule are large enough to le substances such as dopamin pass out, but too small fo antibodies to get in. That wa the body's immune system can't reject the cells when th capsule is implanted.

Aebischer has used the tech nique to reverse memory im pairment and Parkinson-lik damage in rats. And he ha helped start a Providence con

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TRYING TO FIX DAMAGED BRAINS

Scientists are experimenting with transplants of living tissue to cure diseases that ravage the brain

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FETAL TISSUE
[illegible] into the brains of Parkinson's and Huntington's disease patients may improve movement and other functions

GENETICALLY ENGINEERED CELLS
Transplanted clusters of these cells can reverse some forms of memory loss and Parkinson-like behavior in animals

GENE TRANSFER
By hooking genes to viruses, scientists can insert new genes directly into normal brains. This may help repair damaged neurons

pany, Cellular Transplants Inc., that plans to apply next year for U. S. Food & Drug Administration approval to begin testing encapsulated cells in people.

Eventually, scientists hope to achieve what Harvard's Isacson calls the "science fiction scenario"—inserting genes directly into the brain. Researchers such as Harvard neurologist Xandra O. Breakefield have already put new genes in rat brains by linking the new DNA to a weakened herpes virus. That way, the virus splices in the new genes when it infects neurons. There are still serious questions about the safety of the technique and whether the genes can be turned on long enough to do their work. But if the problems are solved, "the number of potential uses is almost overwhelming," she says. Someday genes might combat pain, degenerative diseases, epilepsy, and even depression.

FALSE HOPE? Still, scientists remain wary of dramatic claims. Neuroscientist Ignacio Madrazo of Mexico City's Center of Medicine promises to reveal at the New Orleans meeting that he transplanted fetal brain cells to treat a 37-year-old woman suffering from an advanced case of Huntington's disease, a fatal, inherited dementia that strikes in middle age. Now, "she can take better care of herself," says Madrazo. But other neuroscientists haven't duplicated Madrazo's headline-grabbing 1987 announcement that he had signficantly improved the functioning of Parkinson's patients with transplants of adrenal cells. So "these new results have to be viewed with extreme caution," says Harvard's Isacson.

Researchers don't want to raise the expectations of patients too soon. At the University of Illinois medical school neurobiologist Jacqueline Sagen and coworkers have greatly reduced the pain suffered by three terminal cancer patients by implanting painkiller-producing adrenal cells in their spinal columns. If the results are overblown, Sagen worries, "we'll get heart-rending letters from people all over the country—and we can't do anything for them now." Yet she and others expect that before long, these neuroscience advances will begin to make a dramatic difference.

By John Carey in Washington, with Stephen Baker in Mexico City

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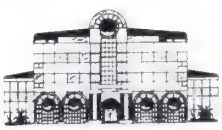

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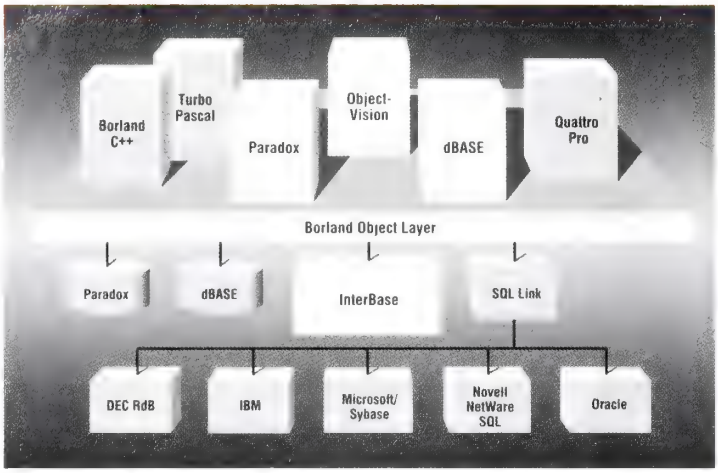

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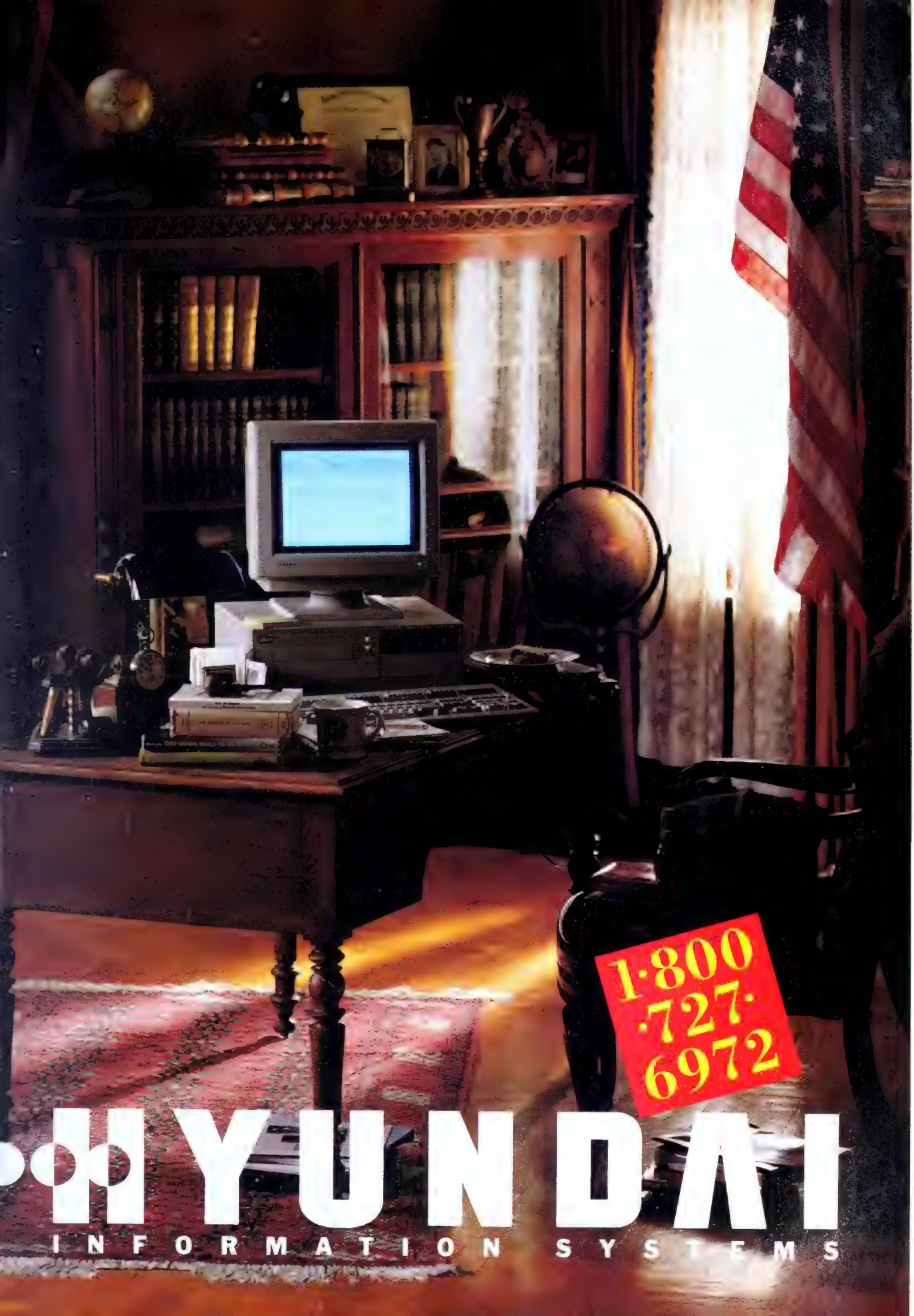
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STEVE JOBS HAS A NEW FIX FOR NEXT: SOFTWARE

Will its new operating system win over Corporate America?

Steve Jobs has always been fast on his feet. Since founding NeXT Computer Inc. in 1985, Jobs has met one setback after another with a quick-fix remedy. His coal-black NeXT computer was introduced in late 1988, but sales didn't take off because the software wasn't done. So Jobs lit a fire under his developers. Then, Jobs found that customers wanted the machine to come with a floppy disk drive. He added one. Next, they told him prices were too high. Jobs lowered them. Now, sales are climbing. But six-year-old NeXT still isn't profitable.

What's the solution this time? Software. NeXT insiders say that Jobs has concluded that whiz-bang hardware is not enough to propel his company into the big time. So he's now planning to sell the machine's object-oriented operating system as a stand-alone product. He hopes the technology, which makes it easy for buyers to customize applications for their own businesses, will build profits for NeXT and persuade big corporations to buy his machines.

So Jobs will announce in January that his NextStep operating-system will be rewritten to run on machines powered by Intel Corp. microprocessors. That means the program, due next summer, will be able to work with millions of IBM and IBM-compatible personal computers. That will make it attractive for PC owners to integrate NeXT computers into their offices, by making it easier for them to share software application programs.

The move pits him squarely against Microsoft Corp., which makes most of the operating systems sold today. But if it works, the payoff could be big. "It's the Trojan Horse that will get NeXT into Corporate America," says Jobs.

FAR SHOT. Jobs badly needs those customers. While 1991 has been a substantially better year for NeXT than most of the industry expected, it hasn't been enough to make the company a serious computer-industry contender. Jobs figures his company will post from $140 million to $160 million in revenues this year (chart), a considerable leap over the $28.8 million NeXT managed in 1990. Still, that's less than the $200 million Jobs was predicting three months ago and a far shot from No. 1 workstation maker Sun Microsystems, which posted revenues of $3.2 billion for its fiscal yea ended last June 30.

Then, there's the small matter of pro its. NeXT has yet to finish a quarter i the black, and it has run through mos of the $133 million invested in the con pany by Jobs, Canon Inc., and H. Ros Perot, the Texas billionaire.

Jobs, 36, is anxious to move his con pany into the black—it's crucial to h plans to launch a public offering withi the next 18 months. Marketing softwar is one way to get there: Softwar commonly has profit margins that ar much higher than those on compute hardware.

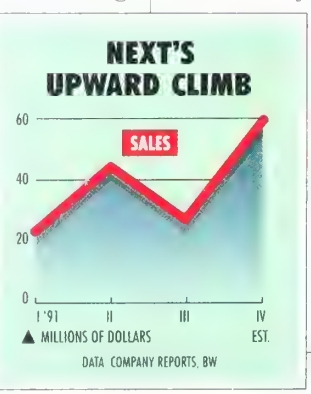
HOT BUTTON. Besides, Jobs figures, th time is ripe. NextStep is the only objec oriented operating system now on th market, and object-oriented program are among the computer industry's ho test hot buttons. The technology make it much simpler to create application pro grams, such as spreadsheets and dat bases. Indeed, the promise is so grea that Apple and IBM have formed a par nership to create their own flavor of ob ject-oriented software over the nex three years.

Jobs thinks he's got a big advantag over IBM and Apple because his softwar has a proven track record. He says buy ers tell him the reason they are plunkin down $4,995 to $7,995 for NeXT work stations is that NextStep allows them t customize software for their businesse as much as 10 times faster than othe computers.

Take UBS Securities Inc., a Wall Stree firm that bought 22 NeXT machines t develop software for options trading an index arbitrage. "NeXT is hitting it stride," says Hadar Pedhazur, a UB vice-president who says it took just thre months to customize the software fo his traders. That's at least three time faster than other workstations coul have done the job, he says.

Still, not everyone is convinced tha Jobs's plans to sell his software wi work. "I give him 40-60 odds," says Nan cy Battey, an analyst with market re searcher International Data Corp. "It hard for a young company to stake claim in a market thi big." Of course, just i case the software ide doesn't pan out the wa he expects, Jobs also ha another plan. Due nex year: new NeXT worksta tions built around supe fast chips.

By Kathy Rebello i Redwood City, Calif., wit Robert D. Hof in Sa Francisco



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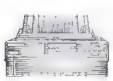
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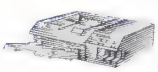
Lasers

Servers

SOFTWARE

WINDOWS OF OPPORTUNITY FOR CLARIS?

Now, Apple's floundering subsidiary is selling non-Apple software

For Daniel L. Eilers, it was a gift rich in symbolism. In September, six months after becoming the new chief executive officer of Claris Corp., a group of employees at the Apple Computer Inc. software subsidiary presented him with a sailboat tiller to keep around the office. The meaning was clear: Claris had to get back on course after a year adrift. Eilers appreciated the confidence they expressed. "I was very touched," he says.

Eilers needed a shot of confidence. A former Apple vice-president, Eilers, 36, is among the first to admit that Claris has been tossed about. At its inception in 1987, the company had a simple mission: write applications programs that show off the Macintosh's talents. Eventually, Apple management said, Claris would be spun out as a separate, public company. But in mid-1990, with Apple's fortunes sliding, management did an about-face. It called off the impending initial public offering and gave Claris another mission: to come up with key software for making Macs more adept in networks. Now, IBM and Apple are suddenly allies. That detente may yield new projects for Claris.

BAD MOOD. These days, in addition to making Mac programs, Claris is planning to sell packages for PCs that run Microsoft Corp.'s popular Windows software. In October, Claris purchased from IBM its first Windows product, a program called Hollywood that does snazzy graphics presentations. Eilers says more non-Mac products are on the way, maybe even programs for laptops that read handwriting. He has doubled the company's development budget, in part to bring out Windows versions of Mac titles such as the FileMaker data base and ClarisWorks, a collection of programs for novice computer users. Eilers is also eager to acquire technology and form alliances with other software makers.

But before he can execute his ambitious plans, Eilers needs to shore up his organization. Morale never completely rebounded after Apple nixed the IPO. Claris executives were deciding on an underwriter when Apple CEO John Sculley and President Michael H. Spindler suddenly decided no-go. They said Claris was too vital to Apple's strategy to be under someone else's control.

For employees hoping to get rich on their stock, it was a blow. By early 1991, Claris' original CEO, William H. Campbell, resigned, and so did every member of his eight-person executive staff. Ten of Claris' 22 directors—the next level of management—fled as well. Developers are still leaving. Says Vern Raburn, founder of software startup Slate Corp.: "Hiring Claris people is not hard."

The upheaval has hurt. A word-processing program called MacWrite Pro may be a year late. "When going public was taken away, a lot of people felt betrayed," explains Michael Hilton, a key MacWrite Pro developer who left. "It took the wind out of their sails." After three years of healthy profit and revenue growth, Claris posted a loss of more than $2 million, on revenue of about $95 million, for the year ended Sept. 30. A big problem, insiders say, was that Claris figured on getting 75 to 100 Apple developers to transfer over. Claris even leased a building near its Santa Clara (Calif.) headquarters for them. But when most of those Apple workers balked at the idea, Claris had to take a write-down on the lease.

SHOCK THERAPY. Eilers concedes that the executive exodus and sudden strategy changes have "clearly been a shock." But, he claims, Claris is finally stabilized and moving full steam ahead to break into Windows and other hot markets. Says Eilers: "Claris is now on a path to be more successful than many people in this company could have imagined."

But some people wonder if Claris, without independence, can really com-

CLARIS' ZIGZAG COURSE

APRIL, 1987 Apple forms Claris to make and sell Macintosh software

MAY, 1990 Claris prepares to go public; starts writing prospectus

JUNE, 1990 Apple halts public offering and reacquires 20% stake from Claris employees for $40 million

JANUARY, 1991 CEO William Campbell resigns to head Go Corp.

MARCH, 1991 Daniel Eilers becomes Claris CEO

OCTOBER, 1991 Claris buys rights from IBM to first non-Mac product

DATA: COMPANY REPORTS, BW

pete aggressively in new software markets. "I don't know that Claris will survive within Apple," says one Claris employee. Rivals question whether any hardware maker can run a software operation to compete with the likes of Microsoft, Lotus, and Borland. Indeed, IBM recently decided to close down its lackluster PC-applications software division.

"It will be a tough competitive environment, no question," says Eilers. "But we think we have a tremendous opportunity." To seize it, Eilers must find ways to boost morale—and fast. Otherwise, he may have to man the sails as well as the tiller.

By Kathy Rebello in Santa Clara, Calif.

Software Captain.

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If it had less legroo and cost thousands mo

Logic would seem to dictate that when you pay thousands of dollars more for a car, you should get a lot more car. Apparently, in the case of the Cadillac Sedan DeVille versus the Chrysler Fifth Avenue, logic does not apply. Both cars provide ample room for six, air-conditioning, automatic transmission, automatic load leveling, stereo sound system, fully reclining seats, all as standard equipment. Both offer safety and performance. A driver's air bag is standard on the Chrysler Fifth

*Standard equipment levels vary.
Legroom comparison to Cadillac Brougham. †Excludes normal maintenance, adjustments and certain wear items. See limited warranty at dealer. Some restrictions apply.

n, a lesser warranty, e, it could be a Cadillac.

Avenue, as is a powerful fuel-injected, 3.3-liter V-6. Anti-lock brakes are also available. Here, however, is where logic totally falls apart. The restyled Chrysler Fifth Avenue costs thousands less, yet it has more legroom than the largest Cadillac.* And it offers a better warranty: bumper-to-bumper protection for 5 years or 50,000 miles.† So if you're looking for a great luxury car, defy logic. Pay less, get more.

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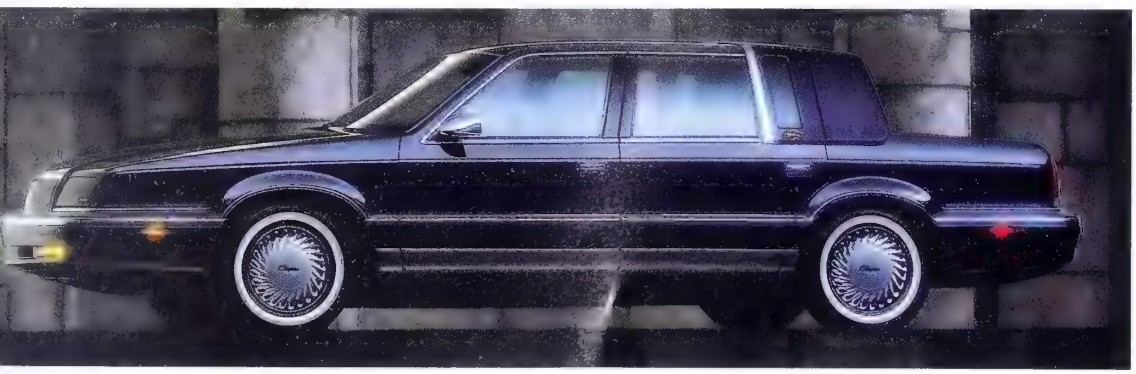

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COFFEE

FEWER CUPS, BUT A MUCH RICHER BREW

As the U.S. coffee habit wanes, gourmet-blend sales perk up

Seattle these days is in the grips of gourmet-coffee madness. Care to catch up on the local cultural gossip? Try the counter at Starbucks, where earnest yuppies plunk down $1.35 for *latte macchiato*—espresso with steamed milk and a touch of froth. Want something to sip while enjoying Caribbean street music? There's Henry's Decaf ($1.10) at SBC Coffee. Need a shopping pick-me-up? At Gloria Jean's in the Westlake mall, mocha with whipped cream goes for $1.60.

You would never know it from Seattle's caffeine craze, but most Americans now measure out their lives with fewer coffee spoons. The National Coffee Assn. figures consumption is down, from 3.1 cups a day per adult in 1962 to an estimated 1.75 cups in 1991. In these health-conscious times, only half of U. S. adults indulge, down from three-quarters in the 1960s. Retail coffee sales, at around $6.7 billion, have barely budged in five years.

NICE NICHE. Yet purveyors of gourmet coffee beans are thriving. According to New York research firm Find/SVP, sales of gourmet coffee—specialty roasts and varieties such as Kenyan or Hawaiian Kona sold by companies not affiliated with the big brands—have grown an average of 13% annually, to about $780 million this year (chart).

Some of these specialty coffee chains are going national, so much of the country could catch Seattle's mocha mania. Starbucks Coffee Co. has added coffee bars to its bean shops under President Howard Schultz, a former housewares-company executive who bought out the original owners in 1987. Starbucks has entered the Los Angeles market. San Diego and San Francisco will be next.

BEYOND BOHEMIA: STARBUCKS IS BLANKETING LOS ANGELES

With 110 stores now and an estimated $80 million in revenues, Starbucks is rivaled only by Gloria Jean's Coffee Bean in Buffalo Grove, Ill. Gloria Jean's has 124 stores in over 100 cities and will open 58 more by 1993, mostly franchises. According to the owners, revenues jumped from $18 million in 1989 to $50 million this year. Other chains are Florida's Barnie's Coffee & Tea Co. and Michigan's Coffee Beanery Ltd.

These chains turn an amenity once confined to bohemian burgs such as Berkeley, Calif., into a business that jives with several trends. There's the national thirst for sobriety. In Los Angeles, coffeehouses have become late-night hangouts for the young set. "Everyone is quitting alcohol and drugs," says Stefan Bell, 22, an actor who frequents the Living Room. "You see people coming in after AA meetings."

And as an affordable luxury, gourmet-coffee sales percolate despite the weak economy. "You can't buy that new car, but you can splurge on a cup o coffee," says Edward C Kvetko, co-owner o Gloria Jean's. Th chain, started by forme beautician Gloria Jea Kvetko and her forme homebuilder husband has targeted malls. Th menu includes such fla vors as hazelnut an French vanilla.

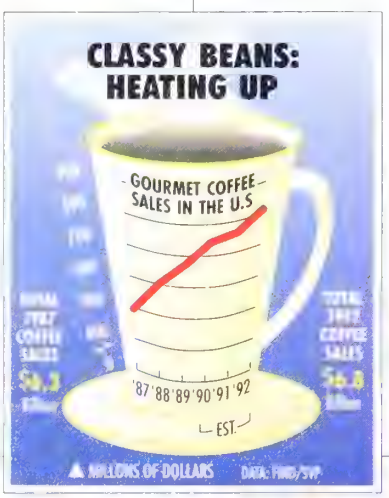
Starbucks disdain such baroque flavors But it does cultivate a air of romance, a con cept not usually associ ated with that cup o regular unleaded man Americans drink. Star bucks locations com complete with Italian style coffee bars an *biscotti* in glass jars "We're not just selling a cup of coffee, we ar providing an experi ence," Schultz says.

Not everyone rave about that experience In January, a scathing review in *Consume Reports* criticized Star bucks' "bitter charred taste." Unfazed Starbucks master taster Dave Olse says: "A phenomenal number of peopl are deciding in our favor."

So far, Starbucks and Gloria Jean's have not hurt each other. The questio is what Procter & Gamble's Folger's Kraft General Foods' Maxwell House and Nestlé's Hills Brothers and Chase & Sanborn will do. All offer upgraded ver sions, using tags such as "gourmet su preme," "French roast," and "100% Co lombian." Nestlé has bought Sark's, a California whole-bean marketer. Kraf sells high-quality beans, labeled Maxwel House Private Collection, in stores an Sweden's Gevalia Kaffe by mail. It' also selling coffee from Jacobs Suchard a European company it recently bought

But the purchasing departments o the top coffee sellers still largely favo lower-priced beans, and they have yet t throw much marketing muscle behin gourmet brands. "Up to this point, th small companies have been protected," says Tom Pirko, president of Bevmark, a beverage-industry consultant. But if th big players do wake up and smell th you-know-what, the most robust part o the coffee market will turn as hot as a steaming espresso.

By Dori Jones Yang in Seattle, wit Julia Flynn Siler in Chicago and bureau reports



(Ring, Ring) What time is it there? OK, I'm in Denver, that's Mountain time, so it's after five. I wonder if Jan's in. (Ring, Ring) I wonder if Wright called. Oh-my-gosh and Richard Terry. (Ring, Ring) C'mon, c'mon. I wonder if marketing got to the West proposal. I need to know if the Brown thing's a go because then the Callen thing's a no-go. And if that changes then my trip to Richmond changes, (Ring, Ring) I wonder why janitors can't pick up phones.

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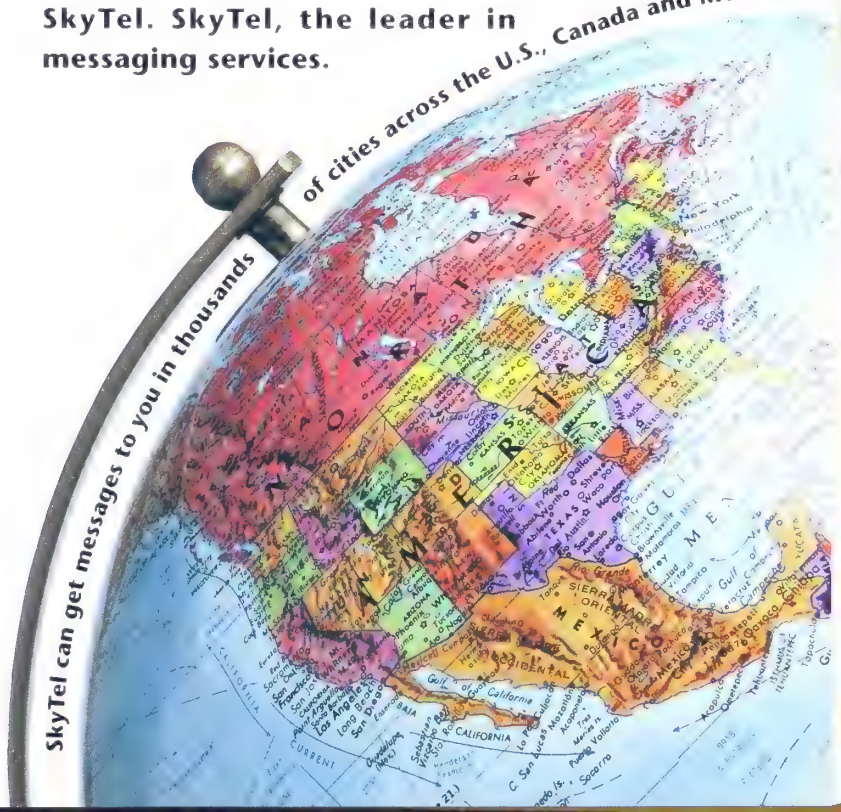

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HE RICH ARE RICHER—AND MERICA MAY BE THE POORER

e widening income gap could cost the U.S. plenty

n recessions, certain things are predictable: Incomes stagnate or fall, and the poverty rate climbs.

his recession is no different. Median sehold income fell 1.7% in 1990, and poverty rate jumped to 13.5%. The bers for 1991, which will be released before the Presidential election in 2, could look even worse. But the lical deterioration in incomes uldn't be regarded as merely a pass- phenomenon. Indeed, the most trou- g thing about the latest numbers is for the majority of the U. S. popula- , they cap more than a decade of me stagnation or worse. At the same e, a small minority has enjoyed rapid s in income. This is already shaping as a juicy morsel for politicians—the rness issue" is on e and more vote- kers' lips these days. ut what has hap- ed to incomes in erica over the past years or so is trou- g on economic as as moral grounds. ply put, growing in- e inequality and bornly high poverty s threaten the coun- s long-term growth spects. That's be- se inequality of in- e distribution and sistent poverty can a damper on pro- tivity growth, while gnating incomes np consumer pur- sing power.

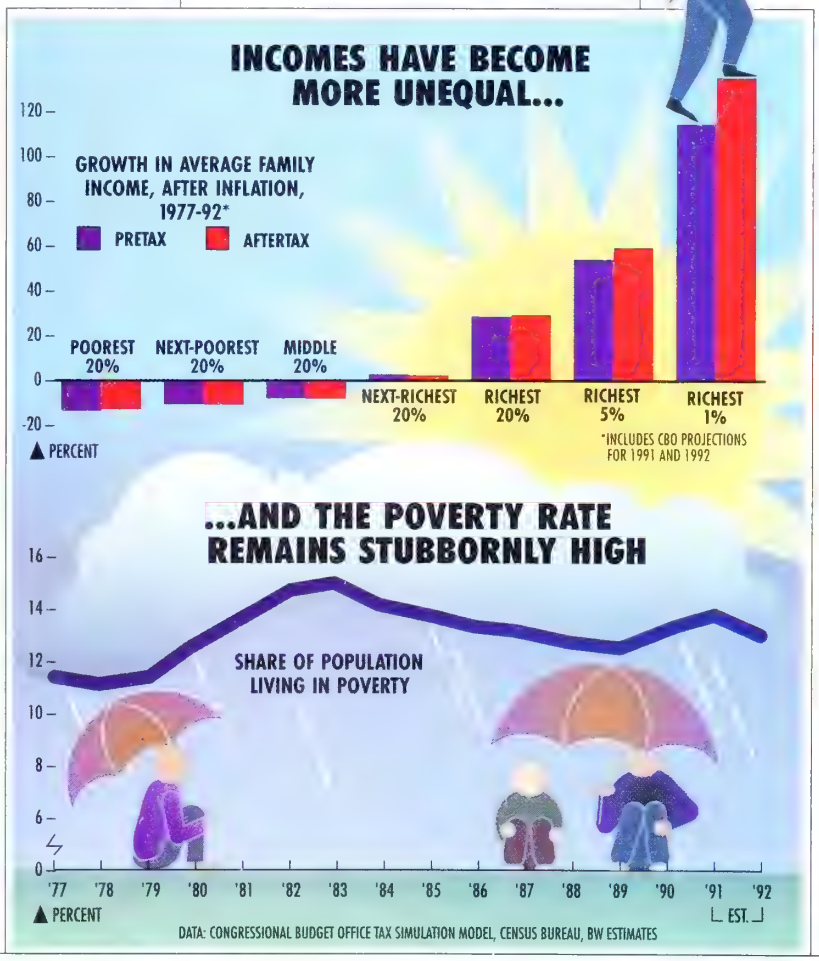
What's more, there t seem to have been economic benefits ved from the rich ing gotten richer, as e economists ar- d in the early 1980s, n the Reagan Ad- istration first hed taxes. The na- 's savings rate was posed to rise, but it 't. And the swelling tide of income for a few was supposed to lift all boats, but it didn't. "I don't know what you can say that's good about what's happened to incomes," says Lawrence Chimerine, senior adviser to DRI/McGraw-Hill.

FAT SLICE. Most of the 3.3 million families whose income topped $102,000 last year—the richest 5% of the population—would probably disagree with Chimerine and give three cheers for their good fortune. By next year, that group will have seen its aftertax income, after inflation, grow nearly 60% over a 15-year period, according to calculations by the Congressional Budget Office based on Census Bureau data (chart). And the richest 1% of the population will have enjoyed even sharper gains in real income, both pretax and especially aftertax, over the same period. Indeed, it's only those in the top quintile, or top 20%, who show a respectable gain in real incomes over the 15-year span.

The "next richest" quintile experienced only a modest gain in real incomes, while the bottom three quintiles saw family incomes shrink in real terms over the period. Meanwhile, 1990's poverty rate jumped 0.7 of a percentage point. While it isn't surprising that poverty rose, it is troubling that the increase occurred on top of an already-high 12.8%.

Typically, sustained economic growth lifts people out of poverty and drives the rate down. If the long expansion of the 1960s is any guide, poverty should have been 3.5 percentage points lower than it was in 1989, the last full year of the 1980s' expansion, according to calculations by economist Rebecca M. Blank at Northwestern University. Key macroeconomic indicators, such as how much output grew, were remarkably similar for the periods 1963-69 and 1983-89 for which Blank made comparisons, yet the results were very different. "The whole relationship between economic growth and poverty has changed," she concludes.

Indeed, it's clear that the link between economic growth and income growth has weakened—the pie has kept growing, but the slices of that pie are being unevenly distributed. What accounts for that weakening link? Interestingly, most economists now agree that tax and transfer policy in the 1980s played a role, but not the chief one. At the uppermost end of the income scale, tax cuts made aftertax income surge even higher than pretax income. And at the low end of the distribution scale, cuts in income transfers hurt the poor. But it's clear that incomes have grown unequally on both a pretax as well as an aftertax basis (chart), so the overall impact of policy



LAUREL DAUNIS/BW

New technology can seem a little intimidating.

Recently a leading computer industry publication reported some frightening statistics.

While investments in information technology have reached 40% of U.S. capital spending, national productivity has not improved since 1973.

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changes has not been that great. "I would estimate that something like 15% to 20% of the change in the distribution is due to changes in taxes and transfers," says Isabel V. Sawhill, an economist at the Urban Institute in Washington, D. C.

Today, economists agree that the widespread competitive and technological changes that occurred during the 1980s induced a sharp increase in the rewards for skill and education, thereby widening the gap in incomes. From 1980 to 1990, men with four years of high school saw their median incomes fall 15.5% in real terms. During the same period, men with four years of college experienced a gain in median income, after inflation, of 1.6%.

The changes in the supply and demand for low-skilled labor may explain why some incomes lagged behind even the mediocre performance of the middle-income group. But they fail to explain why incomes of the richest segment surged. "It's impossible to attribute the sharp increase in income at the top of the scale to a drastic increase in the relative value of the services provided by people at that level," says Henry J. Aaron of the Brookings Institution. "What we're observing is some successful rent-seeking activity," whereby lawyers, investment bankers, and other professionals extract extra income for seemingly unique abilities. And because such endeavors earn high rewards, says Aaron, talent may be diverted from more productive but lower-paying endeavors, such as engineering.

FEWER BUYERS. What are the economic consequences of the stark divisions that have developed? Big earners may be big spenders, but their outlays may not offset cutbacks in the rest of the economy. It's possible, ventures DRI's Chimerine, that with wages squeezed, tax burdens up, and the majority of the population "standing still or worse in terms of purchasing power," the U. S. could end up with "a demand-short economy." He argues that if one person gets a $20,000 raise while another person loses a $20,000 job, the first person's additional consumption is unlikely to make up for the loss of the newly unemployed person's consumption.

For most economists, this is a difficult argument to make for the overall economy. While people with low incomes have a high propensity to consume—that is, they are more likely to spend a large portion of an extra dollar earned—it's also true that high-income people spend a sizable share of their dollars. So on an aggregate basis, consumption in the economy shouldn't contract or be anything but marginally affected by shifts in income distribution. Nevertheless, there are differences in spending patterns that may be important. "The rich simply demand different types of goods," says James K. Galbraith, an economist at the University of Texas at Austin. Both Galbraith and Chimerine worry that income trends could dampen demand in the mass market for goods. And it's that market that just may happen to have more domestic than foreign producers.

Inequality and stagnating incomes may also constrain growth in other ways. "We have to ask ourselves whether the macroeconomy is becoming permanently hostile to less-skilled workers," says Northwestern's Blank. If so, there will be considerable costs. First, there are the costs of having to support a population that is barely making it

> One in five children under 5 lives in poverty, and poor kids don't eat—or learn—as well as their better-off peers

economically. Next, there's the potential cost of possible social disruption resulting from worsening income inequality and a population of persistently poor individuals. Finally, there's the cost of consigning people to low-productivity jobs when they and society could do better.

Poverty is always a burden, of course—both to those who must endure it and to the society that must cope with it. But by far the greatest burden—and the greatest potential loss to the economy—stems from the extraordinarily high level of child poverty in America today. One in five children under the age of 15 lives in poverty, and a staggering 50% of all black children under the age of six live in poverty. Poor children don't eat as well or learn as much as their better-off peers, which means they won't do as well when they become adults. "We are disadvantaging the next generation," says Timothy M. Smeeding, an economist at Syracuse University.

The consequences of high poverty among children and widening inequality throughout the income spectrum can't be readily quantified. And as the economy starts to recover and incomes start to rebound, worries about fairness may recede. But the underlying shifts in income over the past 15 years have been seismic, and they may well make it harder for the economy to get up a full head of steam.

By Karen Pennar in New York

The difference between zoom and zooooooooooom.

If you're looking for a camcorder that can bring the action up close, here are three words of advice: Hitachi Digital Zoom.

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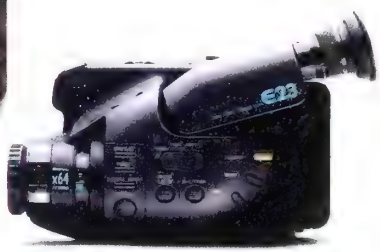

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AT CARGILL, THE TIES THAT BIND AREN'T BINDING ANYMORE

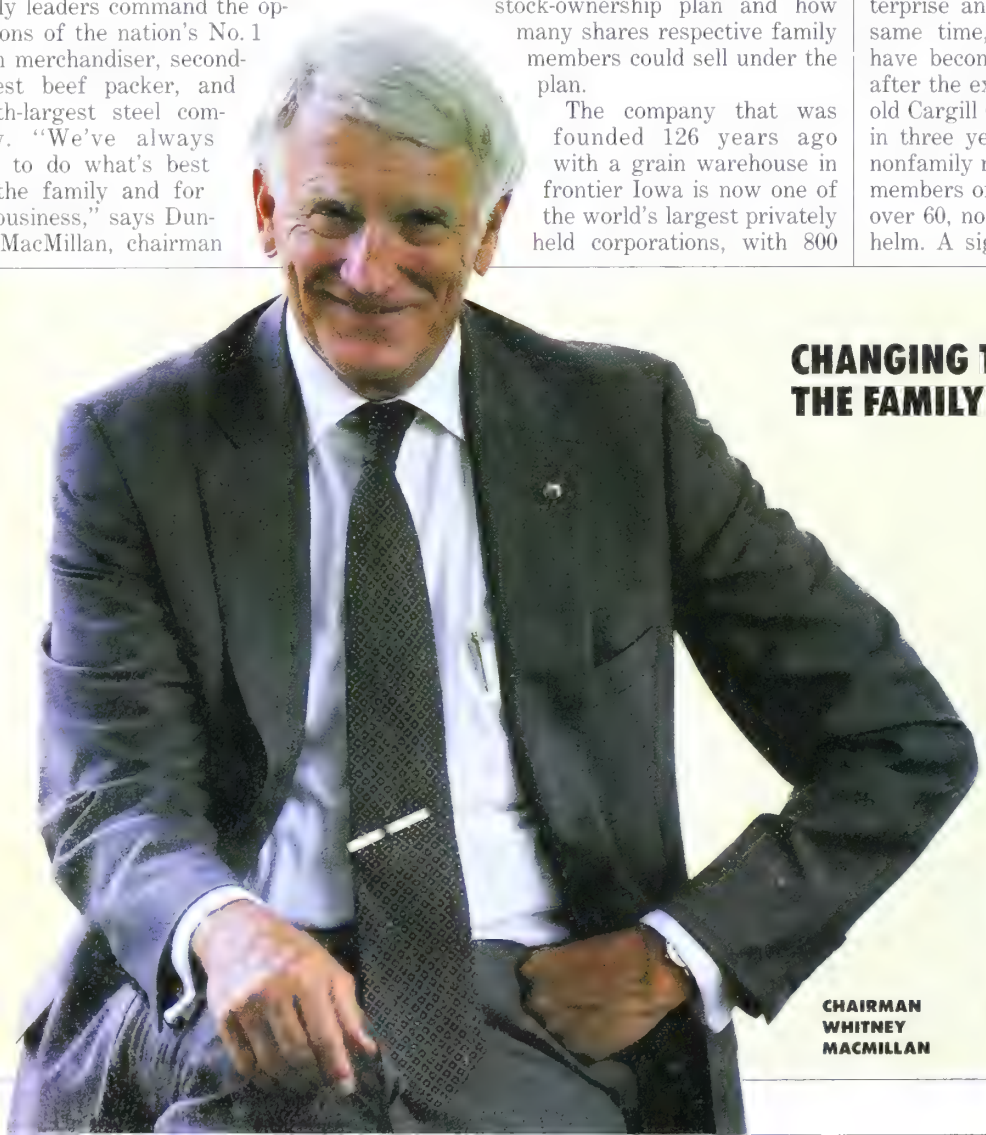
As the agricultural giant moves beyond commodities, its heirs debate the future

For more than a decade, the four silver-haired men met every month in a wooded compound tucked away near the shores of Minnesota's Lake Minnetonka. Sitting in a circle of upholstered armchairs beneath paintings of their great-grandfather and his descendants, the men would talk family business. But for cousins Whitney, Duncan, and Cargill MacMillan and Jimmy Cargill, family business meant Cargill Inc., with its $13.5 billion in assets. The family leaders command the operations of the nation's No. 1 grain merchandiser, second-largest beef packer, and eighth-largest steel company. "We've always tried to do what's best for the family and for the business," says Duncan MacMillan, chairman of Waycrosse Inc., holding company for the family's investments, including its Cargill stock.

Doing what's best for both has gotten difficult lately—so difficult, in fact, that tensions have forced the council of elders to suspend its monthly gatherings. "We have not met because there's been a little bit of anger," says Duncan MacMillan. "It's not as much fun as it used to be." At the root of the trouble are disagreements over a possible employee stock-ownership plan and how many shares respective family members could sell under the plan.

The company that was founded 126 years ago with a grain warehouse in frontier Iowa is now one of the world's largest privately held corporations, with 800 locations around the world, 70 produ lines, and 50,000 employees. The magn tude of those operations and the hect pace of modern business are tugging the ties that have bound the Cargill a MacMillan clans to their company f more than a century.

SLOWDOWN. Like many family-held co panies before it, Cargill is feeling pre sure from the younger generatio which doesn't have the parents' a grandparents' emotional bonds to the e terprise and wants to cash out. At t same time, the ranks of manageme have become filled with outsiders. A after the expected retirement of 62-yea old Cargill Chairman Whitney MacMill in three years, Cargill will be led by nonfamily member. Since the other thr members of the elder council are also over 60, none of them will take over t helm. A sign of the times: This sprin



CHAIRMAN WHITNEY MACMILLAN

CHANGING THE WAY THE FAMILY DOES BUSINESS

▼ **KENYA KLATSCH**
Wholesale businesses such coffee trading no longer pr the profit margins Cargill is looking for

secretive grain giant sought the help consultants McKinsey & Co. for ad- e on management succession and mpany structure.

While family members struggle to re- ine their role in managing the compa- Cargill is facing growing pressures m the outside world. Once-hungry stomers such as China are producing re grain and importing less, while fi- ncially strapped countries such as the viet Union can't afford the grain they ed. Meanwhile, ferocious competition market share among the grain gi- s—including Brazil, Argentina, the S., Canada, and Australia—has kept ces low. That means lower margins Cargill when it sells to its customers. The growth slowdown has forced Car- to undertake wrenching changes t will realign the company toward v markets. The No. 1 aim: to break h Cargill's wholesaling roots and en- higher-margin markets, even selling sumer products. Increasingly, Cargill pinning its hopes on selling branded ducts, from poultry to corn oil. But company is late to this game. Tradi- nal agricultural companies such as Agra Inc. and CPC International nt the 1980s acquiring and develop- consumer brands.

For most of its history, Cargill had le reason to look beyond its tradition- businesses for growth. Its size and ly lead in information technology ot it growing faster than such global ribusiness rivals as Bunge-Borne, ntinental Grain, and Archer Daniels Midland. With its teletypes clacking out information about weather and shipping conditions worldwide, Cargill could shave enough pennies from its competitors' grain prices to make billions in competitive global markets.

The pennies added up quickly: In the 22 years since Cargill first revealed its sales data, revenues have grown from $2 billion to $49 billion today—though this number is somewhat inflated because the company often acts as a middleman. But the information age has leveled the playing field for Cargill and its competitors, and the world's grain trade is shrinking.

'This corporation is not a financial investor,' explains President Hutter. 'We're managers'

DOUBLE DARE. The result? Cargill no longer is meeting its internal financial objectives. Company documents obtained by BUSINESS WEEK, show that it has been more than a decade since Cargill met its sales targets (chart, page 96). "We believe we still have the ability to double the company every five to seven years," says Chief Financial Officer Robert Lumpkins, a leading contender to become CEO after Whitney MacMillan, who declined to be interviewed. "But there's just not a stair-step earnings growth for us." True enough. The $49 billion in sales for the year ended May 31 was up 17% from 1990. But Cargill's return on capital averaged 6.8% from 1985 to 1990, while Archer Daniels Midland's was 9.1% over the same period.

Cargill is taking some blows to the heart of its business, the merchandising operation that produces the majority of its revenues and profits. Squeezed by fierce competition, merchandising—buying and selling commodities such as grain, coffee, and sugar in markets from rural Iowa to São Paulo to Nairobi—no longer offers the kind of profit Cargill wants. But despite efforts to diversify, it still has 18% of its net worth invested in merchandising. The company won't break down revenue figures. "If you've got that kind of enormous business locked into low margins," says Paul Grangaard, a specialist on privately held companies with Minneapolis brokerage Piper, Jaffray & Hopwood Inc., "you're not going to double your company every five years, like Cargill wants to do."

That's why Cargill has been frantically trying to reduce its dependence on merchandising. The company has expanded into everything from grain processing to meats, steel, and financial services. These ventures now account for more than 80% of Cargill's net worth, up from around 60% in 1980. Even so, most of the new investment is still in commodity-oriented businesses.

To reduce its reliance on commodities, Cargill is trying to market to consumers with such names as Fresh Cargo

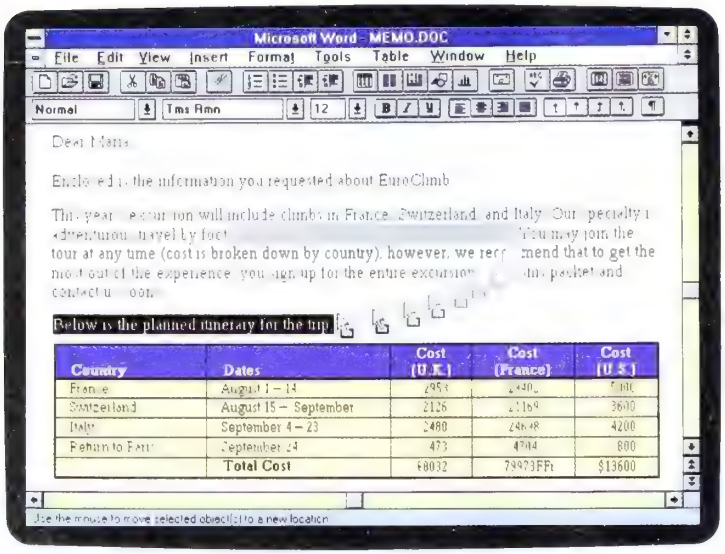
ZATA HEADQUARTERS public market value has imated at $10 billion, and nger family members 'go kers when they hear at'

▲ **PRAIRIE ROSE** Founded 126 years ago in Iowa, Cargill now has 800 locations around the world, 70 product lines, and 50,000 employees

N DRAIN Squeezed by ernational competition lting overcapacity, Cargill is frantically trying to reduce its dependence on grain merchandising

◀ **BRANDED PRODUCTS** Cargill shelved one consumer product line, Excel vacuum-packed meat, but remains the nation's No. 2 beef packer

The first wo
that works like



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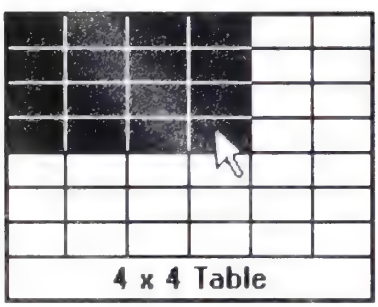

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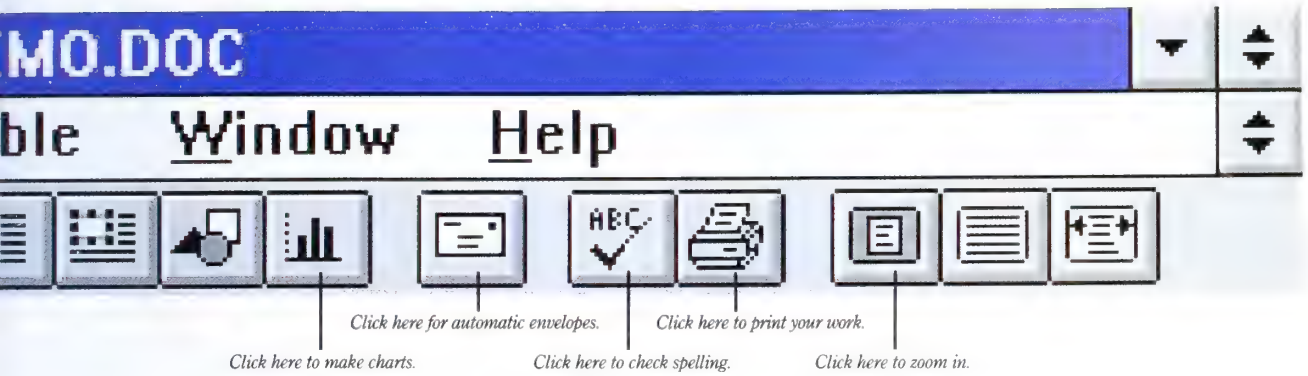

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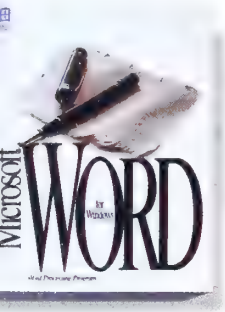

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shrimp and Honeysuckle poultry. Research in the corn-milling division could lead to name-brand products in the sweetener business, too. And Cargill is hiring packaged-goods marketers to manage some of its businesses.

But Cargill has plenty to learn before it becomes a consumer-goods player. Beef eaters didn't bite earlier this year when Cargill put its Excel brand vacuum-packed beef on grocery shelves. The meat's purplish look turned them off, and Cargill abandoned the experiment, at least temporarily. "They're not consumer-savvy," says Ed Jenkins, vice-president for meat processing at Sara Lee Corp.

Maybe not. But Cargill shouldn't be counted out of consumer markets—not with the kind of muscle it has flexed in wholesale businesses. Look at what happened shortly after Cargill opened a $55 million beef-processing plant in High River, Alta., in 1989. It was a gutsy move, considering the glut in the Canadian beef-packing industry. But Cargill figured it could penetrate the market by using modern technology, paying employees up to one-third less than prevailing wages, and underselling competitors. Cargill may have lost $15 million on the plant last year, but its hardball tactics have helped persuade Toronto-based Maple Leaf Foods Inc., one of Canada's largest food processors, to exit the beef business.

AGITATION. As it confronts other competitive foreign markets, Cargill is relying more on joint ventures, which it once shunned. "We'd rather do it ourselves," says Cargill North Asia President J. Norwell Coquillard. "But it's all case by case." Cases in point: a new pork-processing venture with Taiwan's government and an effort by Showa Sangyo and Excel Beef to supply precut beef to Japan's fast-food and hotel industries. Cargill's conditions for joint ventures are always the same—majority ownership and management control. "This corporation is not a financial investor," explains Cargill President Heinz Hutter. "We're managers."

As Cargill wrestles with new markets and new challenges, it also must resolve issues of ownership and management structure. True, the ultimate control of Cargill lies in the hands of the 40 family members who own 100% of the company's voting stock. But a growing contingent of younger insiders is agitating for the opportunity to turn their Cargill stock into cash.

The company's normally placid corporate campus in Wayzata, Minn., was jolted this spring by rumors of a pub stock offering, which proved to be fals Such talk is tantalizing for the young generation, only two of whom curren work for the company. The company annual dividends to family owners a less than 3% of net income, but Prude tial Securities Inc. food analyst Jo McMillin figures Cargill's public mark value would be $10 billion. "The kids just bonkers when they hear abo that," admits Duncan MacMillan.

To enable family members to cash their holdings, the clan is considering employee stock-ownership plan. But a proval has been delayed for more th three months as family advisers wres with the details. The issue appears to most troublesome for Whitney MacM lan. Those who know him say the tensely private CEO is adamantly posed to nonfamily ownership. But Cargill, both the family and the fam business are changing so rapidly that may have no choice.

By David Greising in Wayzata, Min with William C. Symonds in Toronto a Karen Lowry Miller in Tokyo

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NEWSPAPERS

KNIGHT-RIDDER'S KNIGHT IN ELECTRONIC ARMOR?

CEO James Batten looks to data services to rescue his bottom line

James K. Batten knows one newspaper story so well he could knock it out in his sleep: Advertisers are placing fewer classified and help-wanted ads in papers. Retailers and airlines are going bankrupt, and their display ads are vanishing with them. For Batten, a newspaper reporter who rose to become chairman and CEO of Knight-Ridder Inc., it means another miserable year for his industry. Third-quarter profits at Knight-Ridder, the nation's third-largest newspaper chain, plunged 23% from last year.

So why hasn't Batten lapsed into the pessimism of many old newspaper hands? For one thing, he's just back from Europe, where Knight-Ridder is aggressively marketing its financial-information service, MoneyCenter. The service, which transmits financial data and news from the company's own financial newswire, is one of several data services offered by Knight-Ridder. Batten thinks he can become a formidable player in this business because "what's carried us so far is being good at news."

HELP NEEDED. Indeed, Knight-Ridder's reputation is still rooted in its 28 daily newspapers, which include *The Philadelphia Inquirer*, *The Miami Herald*, and other Pulitzer prize winners. But with ad linage way down at most of them, Batten wants to make Knight-Ridder less dependent on the fortunes of the newspaper business (charts). Newspapers still account for 86% of the Miami-based company's $2.3 billion in revenue. By 1993, though, Batten says business-information services will contribute 21% of sales.

It's a risky strategy: MoneyCenter is a distant third in a business dominated by Reuters Holdings PLC and Dow Jones & Co.'s Telerate service. Moreover, the industry's growth has slowed as such customers as banks and financial-services companies have undergone a sharp contraction. Skeptics also point to Dow Jones's tribulations with Telerate. It shelled out $1.6 billion to buy the company, which has since been pummeled by rival Reuters.

Similarly, Knight-Ridder has been investing heavily in information services. It paid a hefty $353 million in 1988 to buy Dialog, an on-line data base. But the company's business-information revenues grew just 7% in the first nine months of 1991, down from 14% in 1990. And some analysts say Knight-Ridder is still too small to compete effectively. "If they want to be a global player," says Dennis Waters, publisher of industry newsletter *Inside Market Data*, "they need to grow much more rapid

Still, Knight-Ridder has avoided se al missteps. Unlike Telerate, it has served MoneyCenter's technolog edge by unveiling new software t alerts subscribers to smart trades m in the markets. And Knight-Ridder nanced the Dialog deal by selling eight TV stations at the peak of the m ket, at a net gain of $67 million. Wh more, a recent stock offering opens way for more acquisitions.

MIDAIR REPAIR. Batten may have l choice but to plunge deeper into in mation services. Revenue at Knight-R der's newspaper division was down 9% the first nine months of 1991. The *H ald*, its hometown paper, is being h tered by a loss of retail advertising competition from Tribune Co.'s *S Sentinel* in nearby Fort Lauderdale,

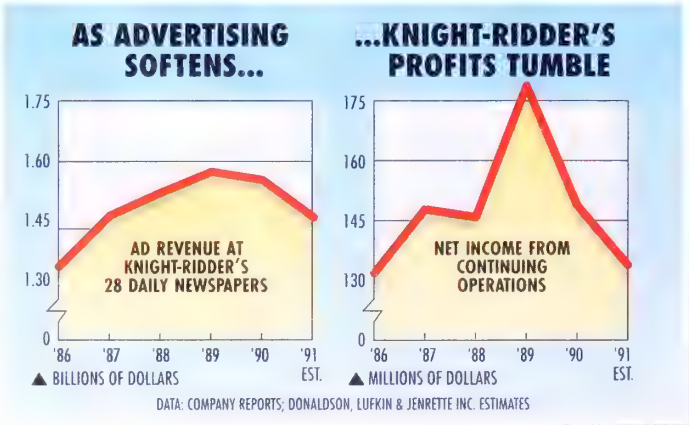
Faced with similar challenges in se al markets, Batten is try almost anything to keep papers competitive. At *St. Paul Pioneer Press*, example, Knight-Ridder trying to expand the news per's advertising reach v an experiment called AdL The program produces "advertorial" health ma zine and sponsors trade f and events linked to the per. If it is successful, could be expanded to ot Knight-Ridder papers.

The company is also training its sales staff The idea is to make th more persuasive with cli who might otherwise s ads into direct mail or ot more targeted media. At *Charlotte Observer*, ad s reps can now grant adver ers an instant credit of u $1,000 to compensate for rors in ads. Newspa chains generally haven't vested much in such s services, but the current crisis is forcing many to think their most basic proaches. "We're repairin 747 at 39,000 feet," conce Jerome S. Tilis, vice-presid for marketing.

The changes go much further t how ads are sold. Among its long-ra projects, Knight-Ridder is studying " lored newspapers." For example, company would add an editorial sec on "parenting" to papers distribute households with children.

Knight-Ridder is also scrambling win over an increasingly elusive rea

BATTEN: "WHAT'S CARRIED US SO FAR IS BEING GOOD AT NEWS"



: time-pressed baby boomers, many
hom don't read newspapers regular-
In Boca Raton, Fla., Knight-Ridder
t $3 million to produce a boomer-
ndly newspaper. Among its features:
t-page articles that don't jump to in-
pages, splashy graphics (including a
flamingo on the masthead), and eas-
o-read classified ads and movie list-
. Despite three price hikes, the pa-
s circulation is up 2% on weekdays
6% on Sundays. "In an industry not
vn for strategic planning," says
spaper analyst John Morton of
h, Jones & Ryan Inc., "Knight-Rid-
has moved to the forefront."
ıt the flurry of activity is not with-
its critics. Newsroom staffers fret
Knight-Ridder will try to impose the
Raton formula on its other papers.
e have also been rankled by Bat-
habit of referring to readers as
tomers"—especially since he's a for-
newsman. Jennie Buckner, Knight-
er's vice-president for news, insists
Boca Raton isn't the model for the
of the chain. But she does want to
e its papers more reader-friendly.

NG FREEZE. Editorial staffers also
y about the company's relentless
cutting, which some say threatens
ıstrous editorial reputation. At *The*
adelphia Inquirer, for example, no
reporters have been hired in over a
. "We've had to look at everything
o and avoid hitting an artery," says
ıty Editor Gene Foreman. Former
ers also say a new $300 million col-
inting plant, set to open next year,
ld have been up and running years
Batten concedes that the plant
l have been built sooner.

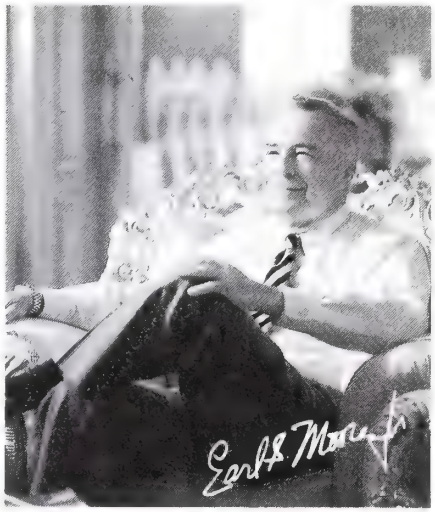
ight-Ridder will certainly have to
mbler in the future. A recent U. S.
eme Court decision to allow the re-
al Bell phone companies to enter in-
ation services means even more ri-
To stay ahead, Batten is already
ring services such as electronic
ifieds. One idea: providing a code
newspaper stories that allows read-
o get more information by phone or
uter. At the same time, Batten is
y about repeating the mistakes of
tron, a primitive videotex service
folded in 1986, after costing Knight-
er $50 million. Viewtron failed in
because customers had to use a
y and complex keyboard.

ll, with few media observers fore-
ng a quick rebound in ad spending,
en is unlikely to stop innovating.
Rolfe Neill, publisher of *The Char-*
Observer: "Jim Batten knows we
to make the cash register ring in
to do the journalism we want to
For a newsman who has exchanged
lines for bottom lines, striking that
ce will be no mean feat.

By Gail DeGeorge in Miami

Lotte, The VIP's Choice

"The service mainly. It's impeccable."



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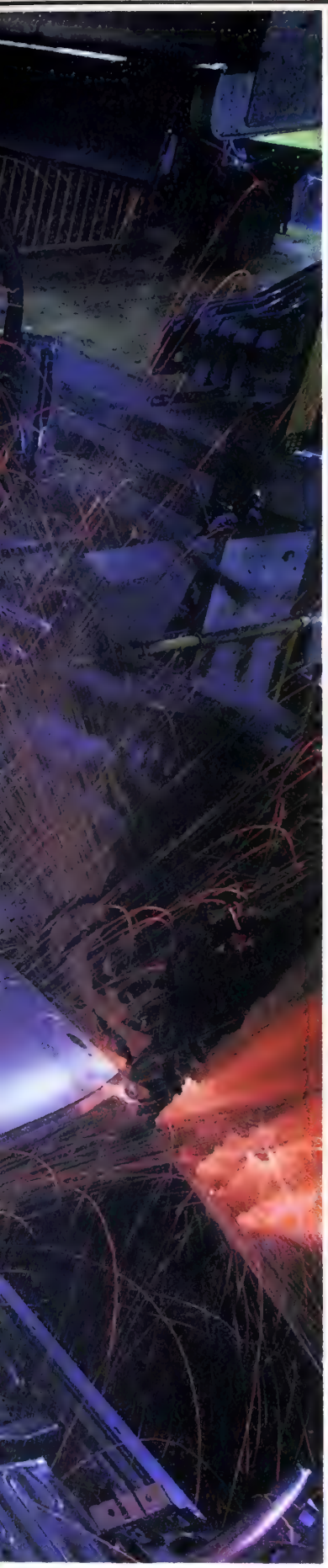

HONDA
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For years, Americans have had a love affair with their Hondas. Compact and mechanically near-perfect, they occupy a special place in the automotive pantheon. First, nimble Civics revolutionized the way Americans regarded utilitarian, high-mileage cars. Next, agile Accords proved you could cram big-car style and comfort into an affordable compact package. And lately, Honda's Acura line has helped to redefine the notion of luxury cars. In all, Americans have bought 2.4 million U. S.-made Hondas since the production line started rolling in Ohio in 1982, and today its Accord is the best-selling car in America.

More than any other foreign auto maker, Honda has also worked hard to establish itself on North American soil. It operates three auto-assembly facilities and an engine plant. Of the 854,879 cars that Honda sold in the U. S. last year, nearly two-thirds were built in North America. And those cars, Honda says, have a "domestic content" of 75%—meaning that three-fourths of the price tag is based on American labor, components, and other costs.

But now, some suspicious U. S. officials are questioning whether Honda's U. S. operations are all they seem to be. Government investigators say that Honda has overstated the local content of the cars it builds in Ohio and Ontario. Studies by the U. S. government and private researchers suggest that Honda's cars—and those of Toyota and Nissan assembled in the U. S.—are mostly collections of Japanese parts handled by Americans but designed, engineered, and fabricated in Japan. The efforts of Japanese auto companies to use American-owned suppliers are "a sham," charges J. Michael Farren, Commerce Dept. Under Secretary.

Two-thirds of the 855,000 Hondas sold in America are made in America. But where do their parts really come from?

The U. S. government is now looking at Honda to see if it unfairly took advantage of the 1989 U. S.-Canadian Free Trade Agreement. If Honda is found to have less than 50% local content in cars shipped duty-free between the two countries under the trade pact, the company could be hit with $20 million in back tariffs for a single year. Worse than the cost, Honda would tarnish its reputation for conscientiously working to become American.

The dispute could exacerbate tensions with the Japanese, since three-quarters of the U. S. trade deficit with Japan is in autos and auto parts (chart, page 109). The issue of Japanese auto *keiretsu*, or industrial groups, operating on U. S. soil is quickly emerging as one of the hottest in Washington. And as U. S. companies relocate offshore only to be replaced by Japanese transplants, the issue of foreign investment could help decide some congressional races, especially in the Rust Belt states. "The Administration thinks foreign investment is the answer to our trade problem," says House Majority Leader Richard A. Gephardt (D-Mo.). "But America gets a few crumbs off the table, while the Japanese market remains closed."

DUAL CITIZENSHIP. The issue of transplants also reverberates across the Atlantic. Should the Europeans consider Japanese cars made in Ohio or Tennessee as American or Japanese? As the Europeans ponder this, the Bush Administration is giving confusing signals. While one arm of the U. S. government is scrutinizing the content of Canadian Honda Civics, another is trying to convince Europeans that Honda Accords made in Marysville, Ohio, are truly red, white, and blue.

The Administration argues that the U. S.-assembled Hondas should not

count against European Community and French quotas on Japanese imports. U. S. Trade Representative Carla A. Hills has been adamant on Honda's behalf, insisting "the nameplate doesn't matter. This is an American car." And Secretary of State James A. Baker III cabled the embassy in Brussels to lend support. The contradiction, says Representative Sander M. Levin (D-Mich.), "is another example of incoherent trade policy—calling something American that is primarily Japanese."

The complex argument over the national origin of autos is also bogging down U. S.-Canada-Mexico free-trade talks. Congress is pushing the Bush Administration to take a tough bargaining stance with Mexico, fearing that Japan will exploit low wage levels there to flood the North American market with cheaply made, Japanese-designed cars. But the government of Mexican President Carlos Salinas de Gortari insists that rules of origin not be drawn so tightly that they turn away Japanese investors.

This dispute could jeopardize confirmation by Congress of any agreement. Warns Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.), a strong backer of the free-trade deal: "Nothing will do more harm than evidence that [Mexican factories] are being used as a launching pad, as kind of a trampoline for foreign goods to get into the United States without paying the proper duties." For its part, Canada seeks assurances that its four Asian auto transplants will not be regulated out of the lucrative U. S. market.

METAL DESK. Of all Japanese auto companies, Honda has operated in the U. S. for the longest and claims the highest U. S. content. It is a pioneer, and thus has emerged as a potent symbol of this debate. Honda officials, both in the U. S. and in Japan, are understandably sensitive about allegations that it misrepresents itself as American. "Look at me!" exclaims Scott N. Whitlock, executive vice-president of Honda of America Manufacturing Inc. "Do I look like a transplant or an American citizen?"

That's a tough question to answer. Whitlock, an intense, 48-year-old former real estate lawyer from Columbus, Ohio, is, of course, an American. But as the top-ranking American at Honda's U. S. manufacturing facilities, he wears stark white coveralls and works at a plain metal desk amid a vast force of other Honda workers, just like a Japanese executive might in Tokyo. The U. S. government has also decided that Whitlock isn't just another U. S. auto executive: His salary is counted as an expense of the Tokyo-based parent, Honda Motor Co., not of the American subsidiary.

Now, as a result of a preliminary U. S. Customs Service investigation, the results of which were first leaked in June, Whitlock is being called on to defend Honda as an American entity. In the report, Customs alleges that Honda manipulated the rules of U. S.-Canadian free trade to overstate the North American value of its Civics built in Alliston, Ont. It concludes that these Civics lacked the 50% North American conte needed to qualify for duty-free export the U. S. (page 108).

As they probed, Customs audito challenged the origin of U. S.-made co ponents, as well. Investigators fou only $51.75 worth of U. S. parts and r materials in the Honda engines made Anna, Ohio, while more than $700 in gine parts came from suppliers in Jap or transplant parts makers, wholly partially owned by Honda.

Customs investigators concluded t just 15% of the value of parts in Ci engines was North American. In fact, Honda's own accounting, the bigg item of local content added at the An engine plant was depreciation of the f tory's equipment. And most of that m chinery had been imported from Jap Customs charges.

Even more explosive was Custo charge that Honda's Tokyo headqu ters dictated the prices that Honda-rel ed suppliers in the U. S. and Cana charged Honda's North American s sidiaries for parts. The parent compa in Tokyo allegedly told suppliers, ma of them partially owned by Honda, sell parts at a loss.

Not only would this practice constit the "dumping" of Canadian-made Civ onto the U. S. market at less than cost of production, a trade violation, it also suggests that Honda engaged transfer-price manipulation, underst ing its U. S. profits to minimize its U tax exposure.

PILING ON. Whitlock and Honda America are livid about such charg and deny any improprieties. Hon points out that the Treasury Dept. h yet to issue regulations on determini just how "American" a particular model is. Customs, Whitlock charg has just made up its own criteria. "W are being pilloried in public because t U. S. government didn't do its job," says. Moreover, he argues that it w necessary to induce Honda's suppli from back home to come to the U because U. S. auto-parts suppliers init ly either couldn't—or wouldn't—m Honda's specifications. Honda also gues that its production system hing on longtime suppliers that can make c cial just-in-time deliveries.

The flap is not likely to stop the however. Other units of the Bush A ministration are entering the fray. T Internal Revenue Service has beefed its scrutiny of transfer pricing behav by Japanese companies. The Just Dept. is reviewing its guidelines whether the vertically integrated Ja nese auto *keiretsu* violate U. S. antitr laws. The Federal Trade Commiss and the U. S. International Trade Co

THE RIDDLE OF A CRANKSHAFT

Honda says the crankshaft in a 1990 Accord is 100% American because it is fabricated entirely in the U.S. But many of the American suppliers are owned by Japanese companies. Thus, it's hard to determine the true "domestic content"

▶ Using American steel, a bar is made by Copperweld Steel Co., 63.4% owned by Japanese companies

▶ Next, TFO Tech Co., a 100% Japanese-owned plant in Jeffersonville, Ohio, forges the steel, adding major value

▶ Then the crankshaft is shipped to Metallurgical Services Co., in Dayton, 100% U.S.-owned, for heat treatment

▶ It returns to TFO for more processing

▶ Finally, the engine plant in Anna, Ohio, 100% owned by Honda, machines it and assembles the engine

DATA: HONDA OF AMERICA MANUFACTURING INC.

on are examining the same issue. of a sudden, the issues of cars and plants and *keiretsu* are coalescing one," says a Washington-based rep- tative of one major Japanese trad- ompany.

e broader issue for policymakers is her the transplants have done what Americans expected. When the nese began large-scale investment .S. facilities in the 1980s, many icans, particularly in the hard-hit est, viewed them as models for a lized U. S. auto industry and as vo- us new customers for the strug- U. S. auto-parts industry. Trans- s were to offer salvation to ican auto workers, whose jobs drying up as imports soared.

rtainly, the transplant factories boosted economies in the six re- where they have located. Aside Honda in Marysville, Nissan select- myrna, Tenn., and Toyota chose getown, Ky. Others include Mitsubi- lotors in Normal, Ill.; Subaru-Isuzu fayette, Ind.; and Mazda Motors in Rock, Mich. Of all these, Honda's is the biggest. Its $2.2 billion cen-

'Look at me! Do I look like a transplant or an American citizen?'

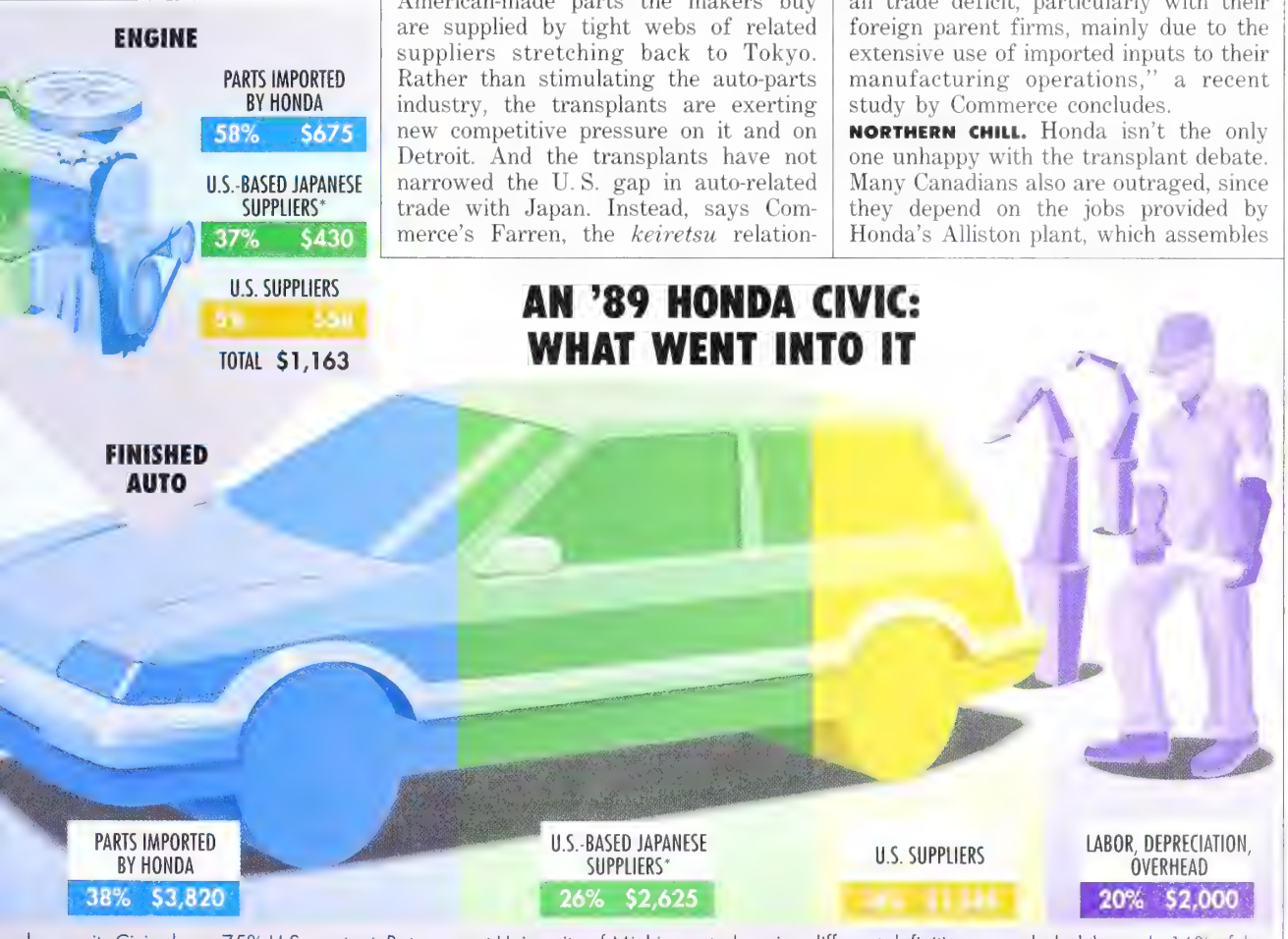
SCOTT WHITLOCK
Executive Vice-President, Honda of America Manufacturing Inc.

tral Ohio complex employs 10,000 workers and pumps a payroll of $7.3 million weekly into the local economy. And 39% of the Japanese-nameplate vehicles sold in the U. S. last year were built in North America, up from just 9% in 1986.

But a growing chorus of skeptics charges that there's less than meets the eye in these statistics. Most of the American-made parts the makers buy are supplied by tight webs of related suppliers stretching back to Tokyo. Rather than stimulating the auto-parts industry, the transplants are exerting new competitive pressure on it and on Detroit. And the transplants have not narrowed the U. S. gap in auto-related trade with Japan. Instead, says Commerce's Farren, the *keiretsu* relationships among Japanese manufacturers and their suppliers in the U. S. "have exacerbated" the gap.

Indeed, the $100 billion auto-parts industry in the U. S. and its 600,000 workers—the largest single manufacturing sector of the U. S. economy—may be in a tailspin. Already, the Japanese transplants "record a large and growing overall trade deficit, particularly with their foreign parent firms, mainly due to the extensive use of imported inputs to their manufacturing operations," a recent study by Commerce concludes.

NORTHERN CHILL. Honda isn't the only one unhappy with the transplant debate. Many Canadians also are outraged, since they depend on the jobs provided by Honda's Alliston plant, which assembles



onda says its Civics have 75% U.S. content. But a recent University of Michigan study, using different definitions, concluded that only 16% of the 989 Civic is truly from American-owned suppliers. That figure would be higher, or 36%, if overhead costs and depreciation of Japanese capital quipment were included. Honda says U.S. content has improved since the 1989 model, but declines to offer specific details

RTS BY JAPANESE-OWNED OR JOINT JAPANESE-U.S. OWNED SUPPLIERS

Total vehicle = $10,030

DATA: UNIVERSITY OF MICHIGAN, OFFICE FOR THE STUDY OF AUTOMOTIVE TRANSPORTATION; BW

THE BIG FLAP OVER THE CUSTOMS AUDIT

When auditors from the U. S. Customs Service first began sifting through the crankshafts, cotter pins, and quarter panels that go into the Honda Civic hatchback in Alliston, Ont., they were "astonished," recalls one official familiar with the investigation. Major chunks of the car, mostly fashioned from Japanese parts, underwent seemingly miraculous transformations as they moved from supplier to supplier, eventually appearing on Honda's books as 100% American-made.

The deeper investigators dug, the more they came to believe that Honda's "Made in America" image was a facade. Customs dubbed its inquiry "Operation Tin Lizzie" and prepared to go after the $20 million in tariffs it said Honda owed on 1989- and 1990-model cars shipped from Canada to the U. S. To qualify for duty-free import under the U. S.-Canada free-trade agreement, at least half the value added in a car must originate in North America. Auditors decided the actual North American content of the cars made in Alliston was less than 40%.

Customs Commissioner Hallett now disavows her memo on Honda's alleged violations

Excited Customs officials thought they had broken a major case and expected swift action from their boss, Commissioner Carol B. Hallett. Instead, they precipitated a bitter high-stakes bureaucratic struggle that sidelined the Honda probe, embarrassed the Administration, and pitted Customs against its parent agency, the Treasury Dept. Now, some congressional Democrats are crying coverup.

AUDIT EXPOSURE. Caught in the center is Hallett, a onetime California state legislator and ambassador to the Bahamas. As the largest and most complex audit Customs had ever undertaken neared completion last March, Hallett's staff briefed her on the contents of a 50-page white paper setting out Honda's alleged transgressions. On Mar. 21, Hallett forwarded the confidential memo, along with a signed two-page cover letter, to her boss, Deputy Treasury Secretary John D. Robson. "We intend to initiate action immediately" to stop Honda from importing cars duty-free from Canada, Hallett declared. "We will also begin action to collect $20 million in duties." Details of the still-confidential memo and report have been reviewed by BUSINESS WEEK.

But eight months passed, and nothing happened. Instead, Hallett has disavowed her own memo, telling Congress she hadn't read the staff-prepared document carefully before signing it. And in a move that infuriated congressional Democrats from car-producing states, Hallett apologized to Honda after some details of the audit were published in *The New York Times* and after Honda lobbyists—including a former Treasury Dept. general counsel—appealed directly to Robson.

It was after the June 17 newspaper story that Peter J. Wallison, former Treasury general counsel and now a Washington partner in Gibson, Dunn & Crutcher, Honda's law firm, called Robson. Wallison asked for a meeting, and two days later Robson ushered the entourage from Honda into the Ulysses S. Grant Room on the second floor of the Treasury building for a 45-minute meeting. Those present included Wallison, law partner and Honda attorney Donald Harrison, and the presidents of Honda's U. S. and Canadian subsidiaries. No Customs Service representatives were present.

Three days later, a chastened Hallett wrote to Hiroyuki Yoshino, president of Honda of America Manufacturin Inc., to assure him that the audit wa not complete and that Honda's "view on particular issues of interpretation would be welcome. Hallett declined re quests for an interview.

'ODD CONCLUSIONS.' Honda is out raged over the leak of confidentia price data. And it sharply challenge the audit's conclusions. "We feel w meet or exceed the 50% North Amer can content requirement," fumes Ros Robinson, senior vice-president o Honda Canada Inc.

Treasury officials, defending thei inaction, insist that Custom "bean counters" exceede their authority and unfairl counted as Japanese th U. S.-based parts supplier entirely or partially owne by Honda. "They came t some odd conclusions," say Deputy Assistant Treasur Secretary John P. Simpson.

Treasury also denies tha Honda lobbyists exerted un due influence in the matter "We are going to do a thor ough audit and look at al the issues and let chips fal where they may," promise Robson. "There is nothing mysterious or conspiratoria involved here."

Congressional Democrats aren't s sure. To them, Treasury's action re calls the overturning of a 1989 Cus toms ruling. Customs had rejected Jap anese attempts to classify some ligh trucks as cars to avoid the 25% truck duty. Under the pressure of heavy lob bying, Treasury reclassified four-doo Toyota 4Runners, Isuzu Troopers, an similar vehicles as cars, even thoug they are still considered trucks fo safety and emission purposes. "It look to me as if somebody muscled that de cision around with lobbying influence and it looks to me exactly as if that ha happened here in this case," charge Senator Donald W. Riegle Jr. (D Mich.). Adds Representative Sander M Levin (D-Mich.): "We don't want the issue interpreted, bargained, or intimi dated away."

Despite Hallett's assurances to Con gress that the audit would be complete by mid-October, the investigation i still in progress—now under the watch ful eye of Treasury officials.

By Paul Magnusson in Washington

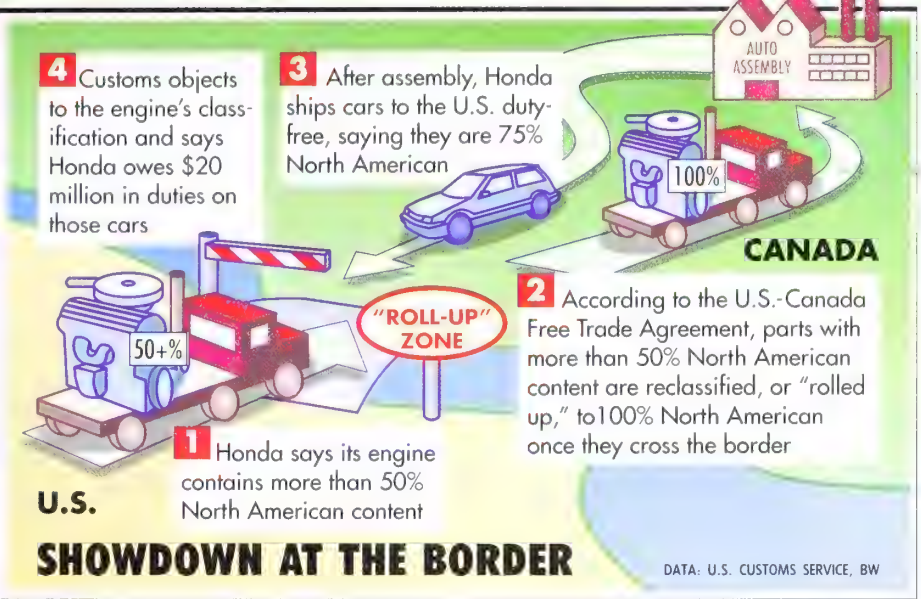
hatchbacks. "It is only the latest ple of an intimidation process" de- l by Washington to divert Japa- investment from Canada back to . S., charges Patrick Lavelle, a for- president of the Canadian Automo- arts Manufacturers' Assn. He calls tions of the Customs Service ac- terrorism."

n General Motors Corp. is con- l, since the North American con- f the vehicles it makes in a joint re with Suzuki Motor Co. in Ontar- lso under scrutiny by Washington. gative ruling could deal a blow to enture, since the Geo Tracker it s in Canada would then be subject crippling 25% truck duty to enter . S.

transplant debate is also a poten- ombshell for relations between the and Japan. The gap in auto trade is ted to grow, even as transplant op- ons expand throughout North ca. The reason: Japanese manufac- operations are twice as likely to t parts for assembly in the U. S. he average foreign company. And are four times as likely to import as the average U. S. company, ac- g to a recent study by Massachu- Institute of Technology economist R. Krugman. Another study, by the rsity of Michigan, forecasts that rs and parts trade gap with Japan iden further, from $31.1 billion in o $45.7 billion by 1994.

TEGIC EXERCISE.' Critics of Japan's policies, in Congress and within dministration, are calling trans- the Japanese auto makers' latest on to drive competitors out of busi- As proof, the trade hawks point to 's insistence that products made nerican corporations that locate in be counted as American-made. xample, Tokyo counts as American emiconductors manufactured in Ja- y IBM of Japan Ltd. Yet Honda of ica is making American cars. One dministration official goes so far as ist that the double standard and panese habit of buying parts from ese suppliers "is a strategic exer- or Japan to totally dominate the wide car market."

irony is that although Honda is greatest scrutiny, it is almost cer- ahead of the other Japanese com- s in establishing American content merican value added. (A BUSINESS Cover Story in 1988 examined the ricanization" of the auto maker.) a produces more than 500,000 cars in Ohio. Its $670 million factory in produces 1.5-liter engines for the and 2.2-liter engines for the Ac- It also turns out brake and suspen- components and automatic trans- ons for both cars, as well as Accord



SHOWDOWN AT THE BORDER

DATA: U.S. CUSTOMS SERVICE, BW

drive shafts and engines for Honda motorcycles. For all cars, engine and transmission assemblies account for 18% to 25% of each one's cost.

Toyota in Kentucky and Nissan in Tennessee also have engine plants, but they are newer and less extensive than Honda's. That limits the amount of local content the factories contribute to their parents' car factories and how many engine parts they buy locally. "If we can't pass [local-content requirements]," says Thomas G. Elliott, executive vice-president of American Honda Motor Co., Honda's marketing arm, "no one else can pass."

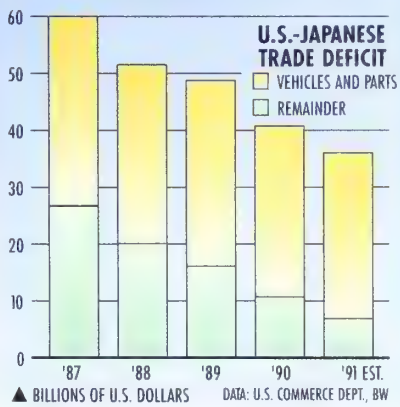
Consider Toyota's Kentucky plant. The company says the 1992 Camrys built in Georgetown are 75% American, as measured by one formula. Toyota Motor Manufacturing Senior Vice-President Alex M. Warren Jr. declines to give the Camry's local content as measured by the more stringent free-trade agreement calculations. Says Warren: "We want to accent the positive."

True, Toyota has more to offer American suppliers now than in the past. U. S. purchases have soared from $70 million in 1988 to an anticipated $1.2 billion in 1992, with more than half of that coming from U. S.-owned companies. Still, of the 145 "American" suppliers for the 1991 Camry, 29 were Japanese-American joint ventures, 18 were Japanese-owned concerns, and 13 were either owned by Toyota or distributors of Japanese-made parts. Perhaps because it is a newer arrival, Toyota has not made the same progress that Honda has in "Americanizing" its production.

The problem is that even Honda's progress has been painfully slow, according to a study by the University of Michigan's Office for the Study of Automotive Transportation (page 107). The Michigan study found that only 16% of the Civic's content consisted of parts purchased from U. S.-owned suppliers. "It was a shocking number," says J. P. Reilly, president and CEO of Tenneco Automotive and chairman of the Commerce Dept.'s Automotive Parts Advisory Committee, which sponsored the study. Because Honda has been a trendsetter among transplants, he says, it was chosen for scrutiny to see "how this problem will look five years from now. But there was no progress."

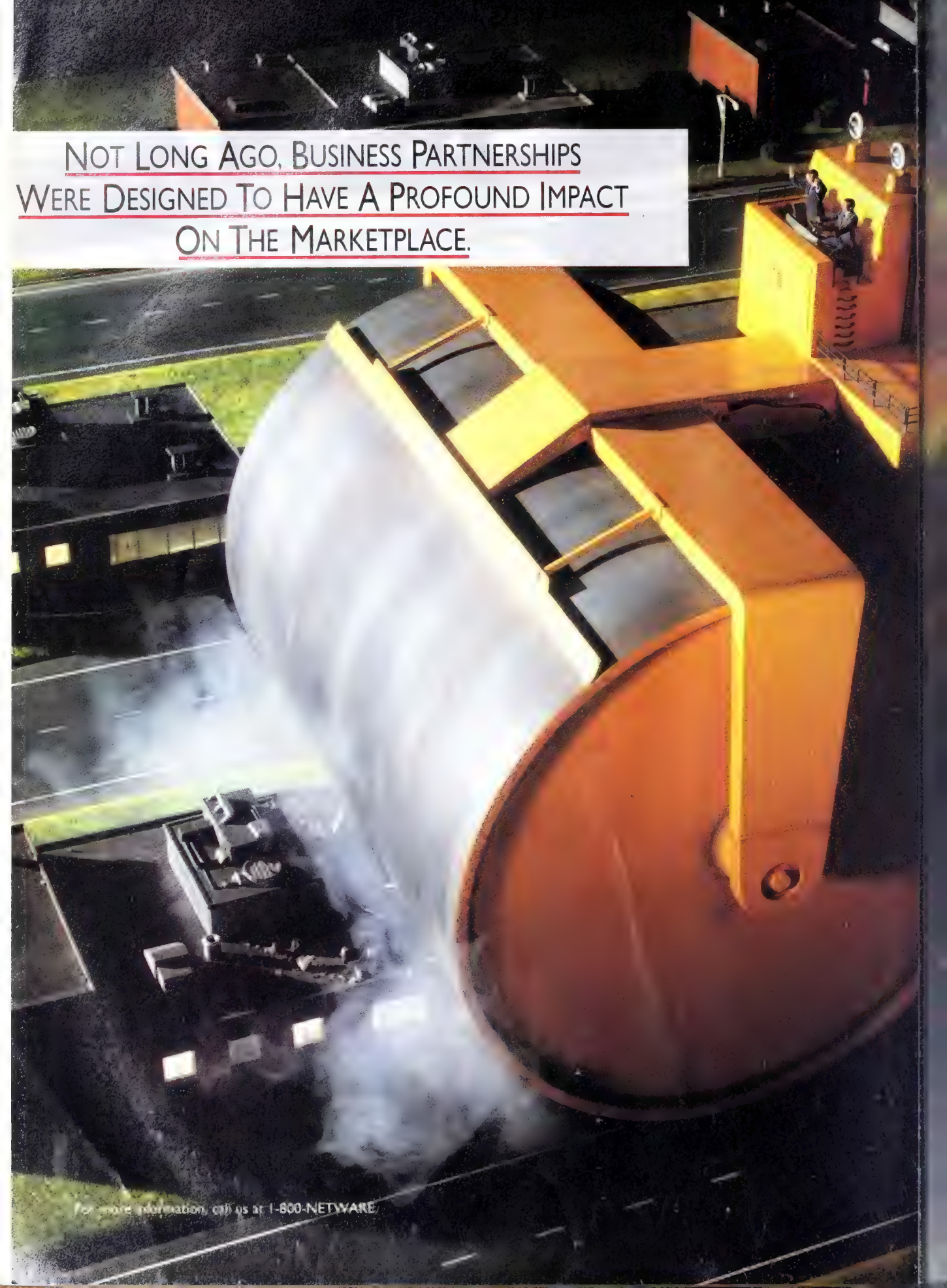
The embattled auto-parts industry doesn't have to wait five years to start worrying. In the first nine months of this year, the Japanese transplants produced 25% of all passenger cars built in the U. S. The Michigan study also found that the parts provided by U. S.-owned suppliers were mainly low-margin commodity components. The more lucrative parts still came from Japan or from Japanese suppliers who had set up shop in North America. Notes David J. Andrea, a co-author of the report: "With the transplant suppliers, you're creating stress on the traditional suppliers, who have been beaten down by the Big Three carmakers' loss of market share. This is

THE TRADE GAP: AUTOS TAKE A GROWING BITE



DATA: U.S. COMMERCE DEPT., BW

ALBERTO MEJIA, BW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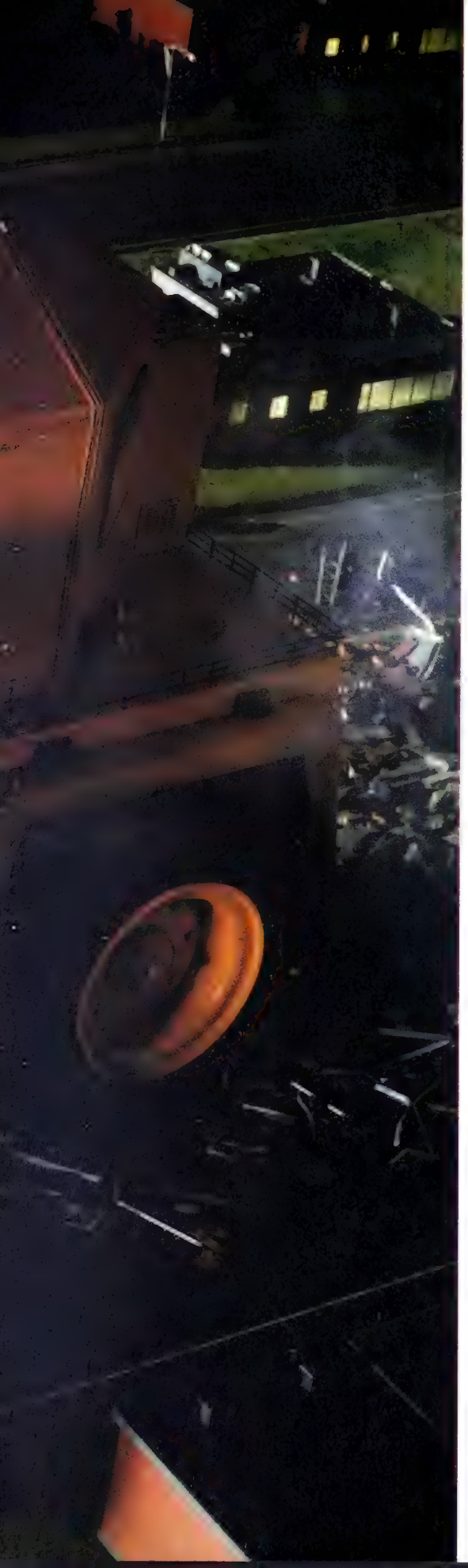

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Honda disputes the study. When the research was done in 1989, the Anna engine plant was still being phased in, says Honda. Overall local content is higher than the study found, and the engine's local content in particular now exceeds 50%, not 42% as reported. Honda declines, however, to provide a more detailed breakdown of its own local-content analysis.

Not that it's easy to calculate local content. Nearly three years after the free-trade pact with Canada went into effect, Treasury officials admit, only "interim" regulations covering relatively noncontroversial issues exist. By contrast, Revenue Canada has promulgated a complete set of regulations. Honda claims that Revenue Canada has certified the Marysville-built Hondas to be North American enough to qualify for duty-free import into Canada. But Revenue Canada says it is just beginning its first audit of a U.S.-based Japanese transplant. And it is Mazda that they are looking at, not Honda.

CORN ROW. What should be counted? The 75% figure claimed by Honda and Toyota includes overhead costs that the trade pact doesn't allow. Surely, the wages paid assembly-line workers represent local inputs. But the heart of the argument is how to count parts bought from a Honda-affiliated or other Japanese supplier that has thrown up an assembly plant in a cornfield to merely inspect, test, and paint components shipped from Japan. And in capital-intensive auto manufacturing, to what country do auditors attribute the value added by machinery, especially if the machinery is from Japan?

Honda asserts it couldn't get a straight answer to its questions. Whitlock says that when he recently asked a group of Customs auditors whether Honda should use tax or book depreciation schedules in his calculations, "they just squirmed and laughed and looked at each other." Customs Commissioner Carol B. Hallett refused to discuss details of the audit. "I concede we may not have drafted the Canadian Free Trade Agreement right the first time," says John P. Simpson, deputy assistant secretary for enforcement. "We expect to be able to fix some of these problems in the North American negotiations."

Mazda's Flat Rock (Mich.) factory: Transplants have clearly boosted local economies—but critics say not enough

Among the flaws that need fixing, says Simpson: a practice called roll-up. Under this accounting method, the local content of a part may be recalculated whenever it undergoes "substantial transformation." Once the North American content exceeds 50%, the component may be counted as 100% American at the next stage of production. This allows vertically integrated companies such as Honda to manipulate the process, Customs auditors say. Simpson allows that "it is possible, with some extraordinary planning, to have a car with less than 50% North American content become 100% North American on paper."

This, say the Customs auditors, is exactly what Honda has done (page 109). Outside experts note, however, that there can be honest differences of opinion. "It's a largely subjective rule," says Ralph H. Sheppard, a New York attorney and authority on rules of origin. "It's hard to describe. You have to know it when you see it."

Throw these complex que tions into the pending U.S Mexico-Canada pact, and yo understand the nightmares Big Three executives. Detro wants to get the maximu benefit from free trade for i self and the other auto mal ers already in Mexico—Volk wagen and Nissan—but doesn't want any newcome in autos to share that adva tage for at least 15 year And the Big Three also wa to protect their U. S. busine with high local-content r quirements: Chrysler an Ford seek a 70% North Ame can content rule, while Gene al Motors is pushing for 60% limit. All want to scra the roll-up process and me sure the actual local content

NEW LAWS? Against th backdrop of a domestic indu try in turmoil, Customs' aud of Honda proceeds. No matte how it comes out, the contr versy isn't likely to go awa In fact, it could deepen if th economy deteriorates and th Big Three continue to los market share. As an electio year approaches, the Dem crat-controlled Congress and the Whit House are certain to get more combativ about the growing trade deficit. Som politicians will single out the Japanes Already, the Democratic leadership drafting laws that would restrict Jap nese imports and transplants.

Ultimately, responding to Honda an other Japanese auto investments wi force Americans to tackle sensitive i sues that have long been taboo. Th Bush Administration is dead set again greater regulation of foreign investme and against setting rules that pick wi ners and losers in the marketplace. Y the political and economic pressure rising for it to at least clarify the rul that will prevail not only in the U. auto industry but in an expanded Nort American marketplace.

As that happens, Laura D. Tyso economist at the Berkeley Roundtabl on International Economy, predict Washington will have to "strive f greater quality of investment," not ju count jobs. And it will have to be don without choking off investment or trad That would simply interfere with Amer cans' love affair with Hondas, while d ing nothing to guarantee quality jobs.

By Paul Magnusson in Washington an James B. Treece in Marysville, Ohio, wit William C. Symonds in Toronto an bureau reports

LOUIS PSIHOYOS/MATRIX

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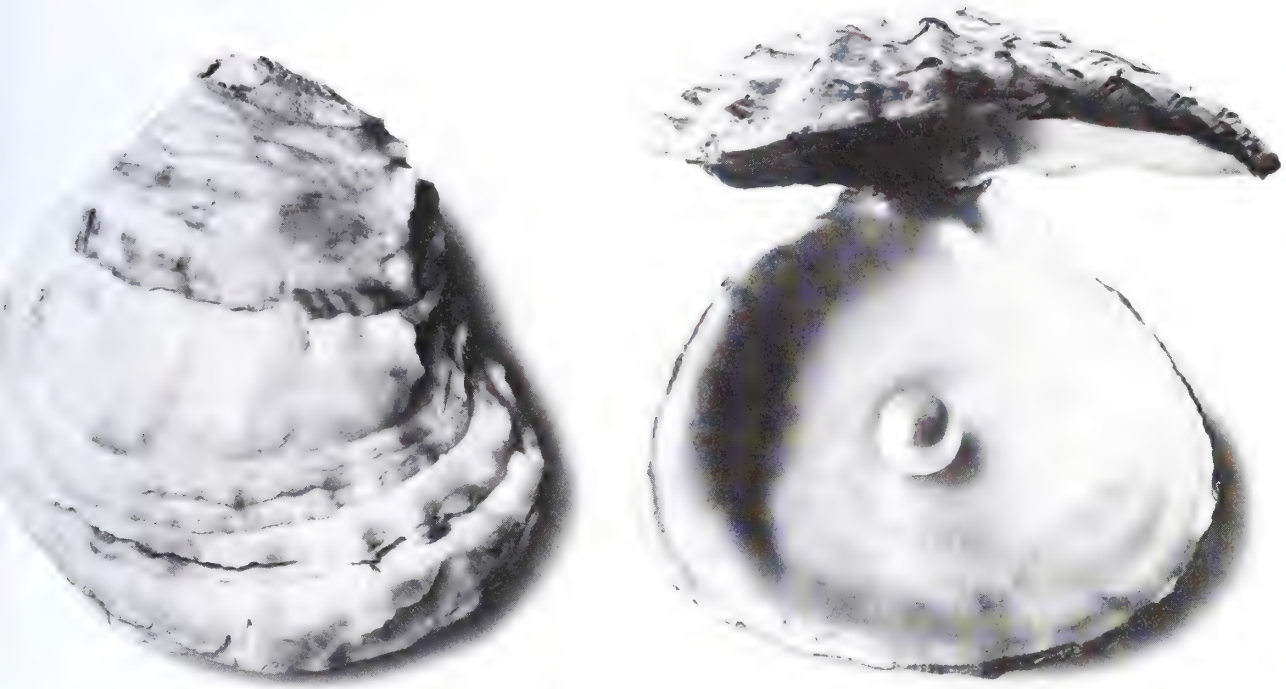

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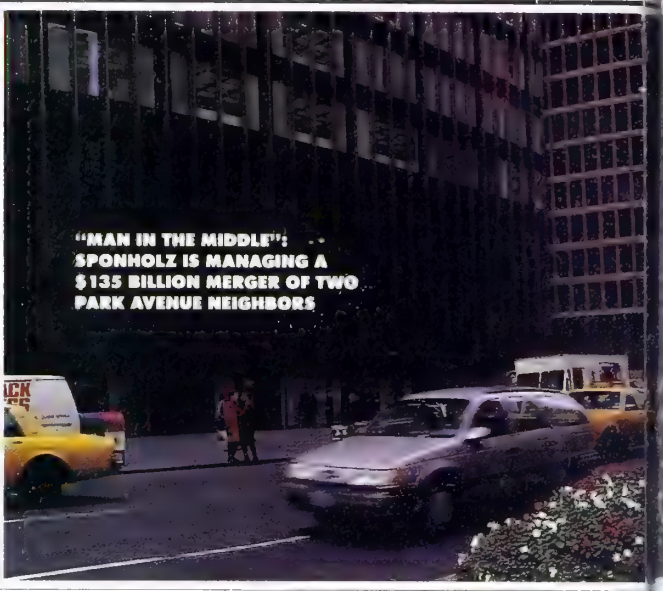
TROUBLES OF A MODEL MERGER


"MAN IN THE MIDDLE": SPONHOLZ IS MANAGING A $135 BILLION MERGER OF TWO PARK AVENUE NEIGHBORS

The closely watched megamerger of Chemical and Manny Hanny isn't a tidy combination—yet

Joseph G. Sponholz, Chemical Bank's affable chief financial officer, isn't kidding when he calls himself "the man in the middle." As implementation manager for the planned merger of Chemical Banking Corp. and Manufacturers Hanover Corp., Sponholz, 47, is trying to turn what started with a secret handshake last spring between two rival chairmen into what they have described as a $135 billion marriage of equals that will produce a mammoth institution second in size only to Citicorp. "We're trying to take the best of both worlds," says Sponholz, fresh from his umpteenth meeting with Chemical Chairman Walter V. Shipley and Manny Hanny Chairman John F. McGillicuddy.

After shareholders from both banks gave an overwhelming go-ahead on Nov. 1, plenty of people are watching to see whether Sponholz can deliver. Several other big banks have announced megamergers since Chemical and Manny Hanny revealed their engagement last July. But bankers, analysts, and regulators coast to coast repeatedly point to the Park Avenue deal as the one that could set the tone for other combinations among hard-pressed banks. Success could open the floodgates for more such "in-market" mergers on amicable terms similar to Chemical's and Manny Hanny's. But failure could dash hopes that these combinations will produce the massive cost cuts and economies of scale needed to get the banking system through the deleveraged 1990s.

The evidence to date, based on extensive interviews with officials of the two banks, is mixed. Nothing has developed that would sabotage the merger. But neither is the deal turning out to be an easy fit. Numerous glitches and hang-ups have cropped up, such as incompatible accounting systems.

EAGER FOR HARMONY. Many of the problems arise because mergers of equals, in which no partner rules the roost, are inherently tricky. When Wells Fargo & Co. acquired troubled Crocker National Corp. in a distress sale five years ago, there was no question who was boss. Wells executives simply imposed their will, often harshly, when conflicts aros But insiders say the chairmen of Chen cal and Manny Hanny seem so eager preserve harmony that they have yet make some tough moves, such as appl ing a sharp knife to the banks' upp management ranks.

To be sure, officials of the two ban were under no illusions that the de would be a snap. Chemical Vice-Cha man William B. Harrison Jr. says it w initially produce "two very destabilize organizations." Adds McGillicuddy: "W knew it was going to be complicate when we started. But neither Walter n I knew how complicated." Unless the complications are resolved, the new ba may have trouble realizing anythi near its promised ri payoff.

Few, if any, bankir mergers looked so aus cious when the deal w announced. Chemical a Manny Hanny have abundance of common i terests. From their pre ence on hundreds of Ne York street corners their ties to America corporate elite, no t bank competitors sha the same scope of bu nesses, ambitions, oppo tunities, and problem They are even of simil size, with Chemical's $ billion in assets exce ing Manny Hanny's by little under $10 billio "You look like us. Y talk like us. You act li us," Manny Hanny Vi Chairman Edward Miller recalls tellin some new Chemical c leagues over cocktai not long ago.

PREMARITAL CONFLICTS

MANNY HANNY	CHEMICAL	OUTLOOK
MANAGEMENT		
Chairman John McGillicuddy practices a system of centralized management	Chairman Walter Shipley prefers to decentralize both power and responsibility	Manny Hanny system will prevail when McGillicuddy becomes merged bank's CEO
ACCOUNTING		
Gives individual units wide leeway to determine profitability	Uses uniform standards for entire bank	No decision yet, but Manny Hanny accounting has edge
SOFTWARE AND SYSTEMS		
Nearly ready to install $80 million branch-automation system	Already has an up-to-date branch system in New York, New Jersey, and Texas	Manny Hanny lobbying hard for its system. Decision expected by yearend
TRADING		
Trades currency mainly on behalf of customers	Aggressive currency trader for own account	Two functions will be combined

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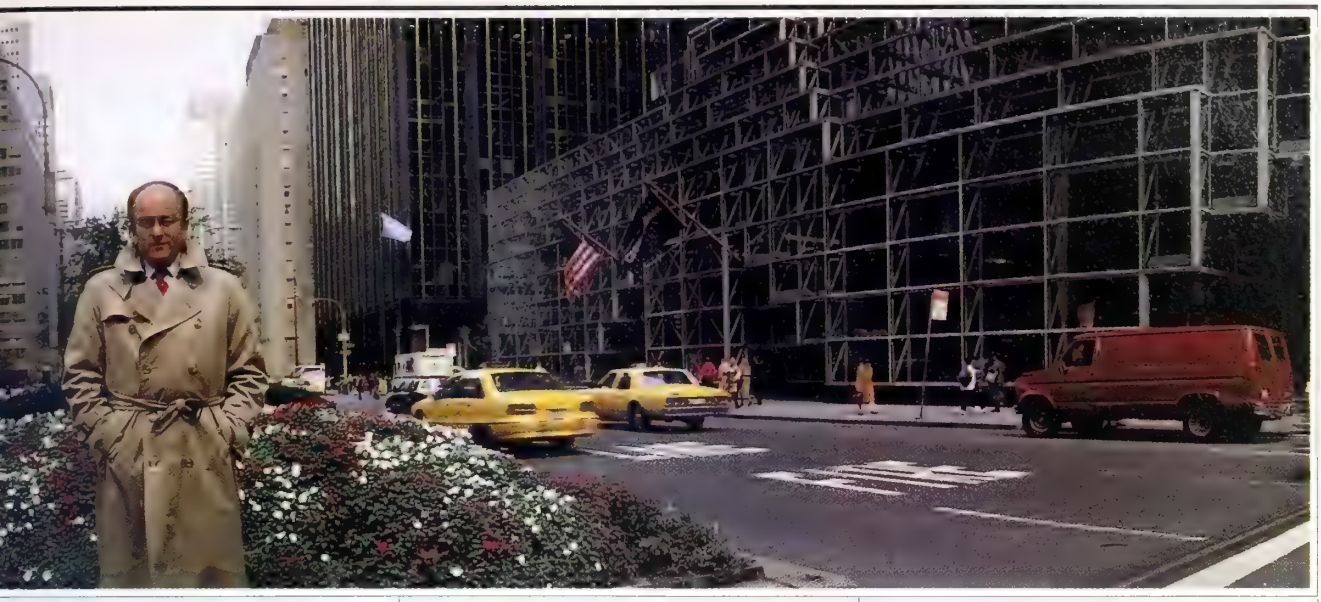


et as the Dec. 31 merger deadline
s, subtle and not-so-subtle differ-
es are emerging. None is likely to
o the new Chemical—minus the
ny Hanny name—from opening for
ness as scheduled on Jan. 2. In fact,
utives at both banks are already an-
ating selling at least $1.25 billion in
mon stock next spring to give their
bank a firmer capital base.

IGIOUS ISSUE.' The problems that
e developed run from the cosmic to
trivial—such as the cost to certify
ks or whether to maintain Chemi-
offer of $5 to any customer forced
ait in line for more than seven min-
. Many of these small matters have
ady been resolved—the "5 for 7" of-
for example, will survive. But clear-
up the cosmic issues is another mat-
altogether.

ccount-handling in the branches is
example. Manny Hanny uses a pair
ging systems for business and con-
er accounts at its New York
ches, while Chemical has a more
ern system in use in its branches in
York, New Jersey, and Texas.
mical's system probably would work
fectly well for everyone after the
ger. But Manny Hanny has just
t four years and $80 million on a
to automate branches and improve
omer service.

redictably, Manny Hanny execs are
ting hard to make theirs the new
dard, even though that would mean
alling an unproven system just when
merger shock will be at its most
nse. But Chemical's technology team
surrendering. "Manny Hanny's peo-
are wedded to their system, and
mical's are wedded to theirs," says
er. "It's a religious issue."

iller, who along with Harrison will
me a vice-chairman at the new
mical, expects to pick one over the
r by yearend, which will cost some jobs. But that will be inevitable. Indeed, Manny Hanny and Chemical desperately need to slash costs. At the outset, the new bank will still bear many of the burdens that drove its partners to the altar in the first place.

The banks will share some $6.5 billion in shaky loans to leveraged buyouts, real estate developers, and Latin American governments. And despite the layoffs of 9,600 workers since the mid-1980s—plus an additional 2,350 through Manny Hanny's sale of its CIT finance unit—the two still suffer from excessive overhead. Standard & Poor's Corp. analyst Tanya Azarchs estimates that noninterest expenses currently eat up a hefty 68% of Chemical's and Manny Hanny's combined revenues—a full 12 percentage points higher than Ohio-based consumer powerhouse Banc One Corp.

CHEMICAL

Despite promises of drastic job cuts, upper management from both sides has escaped

To remedy this, Shipley and McGillicuddy plan to close 70 to 80 branches and cut some 6,500 employees, or 14% of the combined banks' work force, in an effort to save as much as $700 million a year by 1993. Some of those closings and cuts have already been announced, and many other firings are expected "very quickly," perhaps by December, says Vice-Chairman Harrison.

But some observers insist that even more forceful steps are needed—and they wonder whether either McGillicuddy or Shipley are willing to take them. They note that despite promises of drastic job reductions among the new Chemical's rank and file, upper management on both sides seems to have escaped the budget-cutters' ax. To some degree, that reflects a desire to keep current departments functioning until the merger becomes reality. Still, the bank will probably start 1992 with two top-level trading executives, a passel of senior middle-market lenders, and so on. "It's one of theirs, one of ours, one of theirs, one of ours," says a longtime Manny Hanny banker.

Some insiders predict that the biggest cuts may not go through until McGillicuddy retires as Chemical's chairman at the end of 1993. He will then hand the reins to Shipley, who won't have to share power. "They've hammered together some sort of a structure to work this out," says the Manny Hanny exec. "In two years, Chemical will rule."

SICKLY STOCK. Although the Chemical-Manny Hanny merger announcement met with near-universal praise from stockbrokers, the banks' stock prices have languished since then. As a result, some analysts, pointing to the sharp savings that Bank of New York and Wells achieved after taking over local competitors, are urging McGillicuddy and Shipley to get even tougher. "What the markets want is Attila the Hun," says Keefe, Bruyette & Woods Inc. President James J. McDermott Jr.

What the markets get may be less than they would like. But McGillicuddy, Shipley, and their team insist that they will squeeze out every unnecessary dollar of overhead they can. "We have done so much," says Sponholz. "Can we do more? The answer is yes." There will be a heck of a lot of explaining to do if the answer is anything else.

By William Glasgall in New York

INSIDE THE SHADOWY EMPIRE OF ELI JACOBS

The secretive dealmaker crafted a labyrinth of debt-laden companies—and many investors got lost

HOME RUN: JACOBS PAID $70 MILLION FOR THE BALTIMORE ORIOLES IN '89. THE TEAM IS WORTH MUCH MORE NOW

For fans of the Baltimore Orioles, the 1991 season was a big disappointment. But for Eli S. Jacobs, the American League team's mysterious owner, it was the business equivalent of a World Series victory. His triumph came in the form of an appraiser's report that valued the Orioles at $255 million. While other experts consider this figure excessive, unquestionably the Orioles are worth much more than the $70 million Jacobs paid not three years ago.

As Jacobs tells it, his Orioles bonanza is a fitting culmination to a lucrative 27-year career as a Wall Street venture capitalist. "I get an awful lot of pride out of building businesses," Jacobs once told *The Washington Post*. Of which is he proudest? Oddly, the question seems to incense him. "I was not brought up to talk about my successes," Jacobs snaps now, refusing to disclose so much as the names of the various operating companies he controls through E. S. Jacobs & Co., a small investment firm with offices on New York's Park Avenue.

From his earliest days on the Street, Jacobs has enfolded himself in secrecy. In an application filed with Georgia insurance authorities in 1988, Jacobs described himself as "an individual for whom no audited financial statement has ever been prepared." In lieu of the usual documented bona fides, Jacobs in effect has said: "Take my word for it." And to a remarkable extent, people have done just that, on Wall Street and in Washington alike. By all accounts, he is especially well-connected—though not terribly influential—within Republican Party and national security circles.

Even to many of Jacob's closest associates he remains a mystery man. "Few, if any, of his friends know anything about Mr. Jacobs' business interests much less take advantage of them," declared Senator David L. Boren (D-Okla in a letter this summer to *The Wall Street Journal*, which had just profiled Jacobs. Boren and Jacobs attended Yale law school together.

FLUKE HIT. On Wall Street especially, Jacobs' penchant for secrecy is viewed with mounting suspicion. And for good reason. A four-month investigation by BUSINESS WEEK has identified 18 of the two dozen companies Jacobs says he now controls, plus an additional 11 formerly under his dominion (table). Judging by this sample, Jacobs' acquisition of the Orioles not only was the best deal of his life but a fluke. Nearly half of the companies either have been liquidated at a loss or are operating with sharply negative shareholder's equity. Aside from the Orioles, there is not a single, m

thriving business in the bunch. the 29 companies identified by NESS WEEK, eight have been subject overnment disclosure requirements thus offer the best-documented mi-osm of Jacobs' career as corporate er. Three have failed, and the re-ing five all are operating at a loss—ly so, in the case of the two compa-that are Jacobs' largest: Memorex x and Triangle Pacific Corp.

ue, the youngest of these companies xciting speculative interest in the -the-counter market. Founded in SyStemix Inc. is a bio-nology concern that has mulated an operating it of $15 million. Al-gh the company is just nning clinical trials on irst products, Jacobs alized on the stock mar-mania for biotech by g it public in August at a share. The stock has up to about $54. Says bs, who owns 38% of company: "This could one for the history s."

MIXTURE. Perhaps it though biotech compa-are notoriously un-ictable. What's more, NESS WEEK's analysis ests that over the long Jacobs' companies have ed to suffer from a nox-combination of scant y and excessive debt. le such an imbalance characteristic of many aged buyouts, Jacobs employed the same ap-ch in his venture-capital sting. Typically, he has sed capital into fledgling panies in dribs and s—not as equity but ly in the form of loans nded in exchange for ants. As the burden of est payments has vn intolerable, Jacobs' s have often been con-ed into stock.

a three-hour interview is Park Avenue office, bs acknowledges that e of his companies have ed excessive debt but ts that "the bulk of t I do is not leveraged." accepts little responsibil-or the woes of his mani-y troubled companies, ing instead their former agers or depressed eco-ic conditions.

orever, he disputes the conclusion that his record as a corporate owner is weighted to failure. He insists not only that he has controlled scores upon scores of businesses that have escaped BUSINESS WEEK's notice but also that the vast majority of these properties have thrived. If in fact these companies do exist, Jacobs has succeeded in keeping them hidden even from his former partners and employees. Not one of the more than 50 of Jacobs' past and present associates who were interviewed in the course of researching this article knew the names of more than a handful of his companies.

The overriding question that emerges from an analysis of Jacobs' documented history as a corporate owner is: Where did he get the $35 million he put down in buying the Orioles for $70 million?

In a word, dealmaking.

Backed by erstwhile junk-bond powerhouse Drexel Burnham Lambert Inc., Jacobs in the mid-1980s engineered a rapid-fire series of inordinately leveraged buyouts. In the first of his big LBOs, Jacobs acquired Memorex Corp. for $523 million. Two years later, Drexel teamed up with J. P. Morgan & Co. to help fund both Memorex' $1 billion acquisition of Telex Corp. and Jacobs' $406 million LBO of Triangle Pacific.

Jacobs' initial personal investment in this $2 billion trio of deals amounted to no more than $8 million. Yet he obtained controlling blocks of common stock and pocketed $17 million in investment-banking fees. In addition, Memorex Telex and Triangle Pacific alone were required to pay him a total of $1.3 million in consulting fees every year. Even little Flagship Express Inc., created through a $55 million buyout, is obligated to pay Jacobs a $1 million deal fee and an annual consulting fee of $750,000.

WELL TIMED. Then there are Jacobs' trading profits. Two Wall Street sources say separately that in late 1988, Jacobs and an associate offered as "a favor" to sell them Memorex shares at $26 apiece. Both men declined, figuring the stock was worth no more than $10 a share. Nonetheless, Jacobs did unload 344,000 Memorex shares (2.8% of his holdings) by March, 1989. Jacobs says he got less than $26 a share. All he needed to recoup his initial investment was $3.50 a share.

Whatever the price, Jacobs' sale was well timed. As 1989 wore on, Memorex Telex' operating results began slipping well behind projections. Under the terms of a restructuring plan put forth in late October, the company's common stockholders would be completely wiped out. While Jacobs would lose his entire remaining stake, he comes out well

ELI JACOBS' CURRENT HOLDINGS...

	Founded or acquired	1990 sales* Millions	1990 profits* Millions	Jacobs' percent
ANDERSON GRAIN* Grain wholesaler	1986	$73	$0.1	Over 51.0%
BALTIMORE ORIOLES Baseball	1989	NA	NA	87.0
BEEFAMERICA Meatpacking	1988	1,800	NA	35.0
COORDINATION TECHNOLOGY Software	1986	Still in development		Over 51.0
FLAGSHIP EXPRESS* Air cargo	1989	26	–1.1	77.9
INDUSTRIAL GENERAL Motor maker	1985	96	–1.9	Over 51.0
E. S. JACOBS Investments	1984	NA	NA	100.0
LE PEEP RESTAURANTS Denver-based chain	1983	16	–6.3	81.5
LEWCO Toy importer	1990	15	NA	100.0
MANHATTAN TOY Toy maker	1986	10	NA	100.0
MEMOREX TELEX Computer peripherals	1986	1,999	–271.0	35.0
MILNOT Condensed milk	1990	32	0.7	NA
PAUL MARSHALL PRODUCTS Home furnishings	1986	15	NA	100.0
PITTSBURGH CITY CENTER Real estate	1988	Project under development		
RESTAURANTS UNLIMITED Chain operator	1990	84	3.2	75.0
SYSTEMIX Biotech	1988	0.7	–7.4	38.4
TRIANGLE PACIFIC** Cabinets	1988	249	–17.0	97.9
WORLDS OF WONDER Toymaker	1989	In liquidation		Over 51.0

...AND HIS FORMER HOLDINGS

SOLD OR LIQUIDATED AT A LOSS TO SHAREHOLDERS

Bio-Response, Digital Recording, Eyecare USA, Georgia Narrow Fabrics, Jos. A. Bank Clothiers, Materials System, Prime Time Cable, Westronix

SOLD AT A PROFIT

Analytab Products, Fuller, T Cell Sciences

*Figures for first half of 1990 **Figures for first nine months of 1990 NA = not available

DATA: BW, SECURITIES & EXCHANGE COMMISSION, DUN & BRADSTREET CORP., STANDARD & POOR'S CORP., COMPANY DOCUMENTS, COURT PAPERS

ahead thanks to his up-front fees alone.

This disparity angers some Memorex Telex shareholders left with worthless stock. Their complaints are echoed by investors in other Jacobs-controlled companies. Among the dozen former financial backers interviewed by BUSINESS WEEK was Victor Sperandeo, a well-known trader once described as "the ultimate Wall Street pro" by *Barron's*. Sperandeo says he lost the full $200,000 that he invested in two private Jacobs companies, Eyecare USA and International Housing.

MISLED? "I lose money all the time—that's not the problem. The problem is he misleads you," Sperandeo says. "We never got the numbers on these companies unless they wanted more money from us. Whenever I asked Eli how they were doing, he made everything sound rosy. Then I couldn't get him on the phone." Jacobs says that Sperandeo's investment in International Housing has returned to full value since they last talked in 1984. "I have never failed to return a call from Victor," he adds. "Most importantly, I certainly never misled him or any other investor."

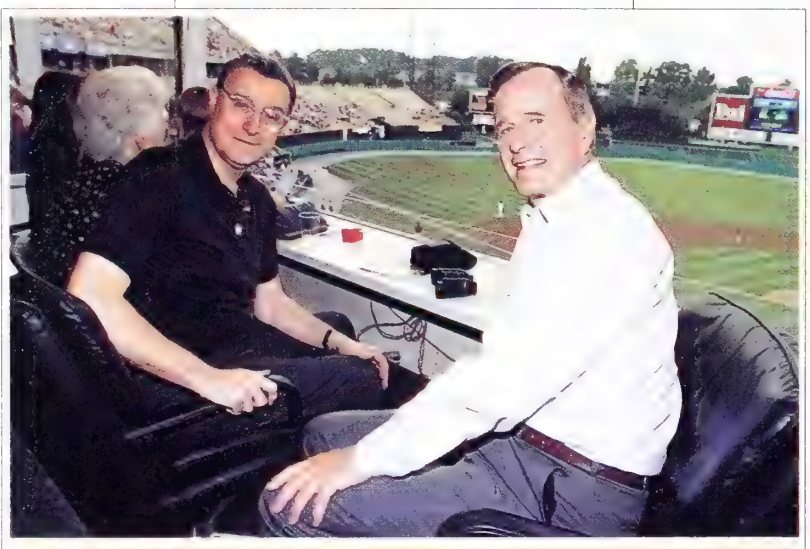
While criticism of Jacobs is pervasive on the Street, even his most vociferous critics stop short of accusing him of violating the letter of the law. The Securities & Exchange Commission has never taken action against him. Likewise, he has avoided messy lawsuits—until recently.

In 1989, Jacobs cut a deal to acquire Rosenbalm Aviation Inc, a tightly held Michigan-based air-cargo carrier, for $55 million. Just before the transaction was to close, Jacobs altered his offer to substitute one-year notes for $15 million of cash. The notes were to be issued by Flagship Express, a shell company into which Jacobs planned to merge Rosenbalm. The sellers agreed on the condition that Jacobs unconditionally guarantee the notes. He did.

Everything proceeded smoothly until Halloween of 1990, the day before the notes came due. Jacobs filed suit against the note-holders, accusing them of cooking Rosenbalm's books. Flagship Express then defaulted on the notes, and Jacobs refused to honor his guarantee on the grounds that he had been defrauded in buying the company. The note-holders countersued.

John F. Keenan, a federal judge in New York, found that Jacobs is indeed liable for the notes. "Phrases such as 'absolute and unconditional,' when placed in a guarantee by a sophisticated investor . . . mean what they say," Keenan declared. In Michigan, though, Judge Barbara Hackett ruled that Jacobs need not make good on his guarantees as long as his fraud case is pending.

In Baltimore, meanwhile, the growing discrepancy between Jacobs' words and actions have eroded his credibility as the Orioles' owner. "As far down the road as I can see, I want to remain the owner of the Orioles," Jacobs said in mid-1990. Yet last June, Jacobs leaked word that he was willing to sell the Orioles after all and indeed was already dickering with two prospective buyers. Naturally, the about-face angered many in Baltimore and caught unawares even Orioles President Lawrence Lucchino.



JACOBS WITH BUSH: QUEEN ELIZABETH ALSO WAS A GUEST

In trying to quell the uproar, Jacobs denied that his flip-flop had anything to do with money. "I'm just a person who likes his privacy," he said. This explanation would have engendered more sympathy had not Jacobs used the owner's box at Memorial Stadium to entertain a ceaseless parade of high-profile visitors. Indeed, just a few weeks earlier, Jacobs had played host to both President Bush and Queen Elizabeth amid great hoopla.

In Baltimore and beyond, swelling controversy has put an angry new edge on what, in some circles, is an old question: Who is Eli Jacobs, anyway?

Jacobs owes much of his effectiveness as a securities promoter to the fact that he neither looks nor acts anything like the prototypical Wall Street pitchman of the 1980s. A long-limbed 6-foot-2, Jacobs is often a bit unkempt. Manifestly ill at ease in most social settings, he haunts corners at cocktail parties and is pro to long, awkward silences even in sm business meetings. "Eli can sit for long time with people and say absolute nothing, which can be very disconce ing," says Edward T. Foote, president the University of Miami and a form college classmate of Jacobs'.

NAME-DROPPER. Uniformly described highly intelligent—even brilliant—J cobs is knowledgeable about a wi range of nonbusiness subjects, notab urban planning and national securi policy. "Jacobs was quite a pusher—s ways meeting people to meet people but very bright indeed," says Philip Johnson, the famed architect, whom J cobs befriended at the outset of his c reer. Ever since, Jacobs has courted pu lic personages as assiduously as he avoided the spotlight himself.

Famed on Wall Street as a dropper names, Jacobs' VIP ti long have been an e sential part of the i age he projects. "T first time I met Eli spent two hours nam dropping his familiari with every big-nam Democrat in Massach setts—this was t Kennedy era," says D vid Zenoff, a Stanfo University profess who met Jacobs in 19 while attending Ha vard University. "Eve time we got togeth over the years he wou name-drop about all t big people he knew government."

At Jacobs' initiati he supplied BUSINE WEEK with a Washington-heavy list references. It includes four U. S. Se tors: Oklahoma's Boren, William S. hen (R-Me.), Joseph I. Lieberman Conn.), and Alan K. Simpson (R-Wyo.). also includes a former director of cent intelligence (William Webster), two f mer White House staff chiefs (Howa Baker and Kenneth Duberstein), a Jonathan Bush, the President's broth

The other critical ingredient of Jaco promotional mystique—in Washingt no less than on Wall Street—is gr wealth. While Jacobs has been careful avoid making direct public claims ab his wealth, privately he long has prom ed himself as one of America's rich men. Once asked by a *Washington P* reporter why he had never appeared the *Forbes 400* list, Jacobs respond with a coy: "I dodged them."

Reared in Newton, Mass., just outs Boston, Jacobs was the eldest of t

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three children of Alyce and William M. Jacobs, who made a fair amount of money in real estate. As a boy, Eli was sent off to Phillips Academy in Andover, Mass. From Andover it was on to Yale University, where he earned undergraduate and law degrees.

Jacobs got his start on Wall Street in 1964 at the august investment bank of White, Weld & Co. In 1970, he resigned to hang out his own shingle, in partnership with a wealthy Yale buddy: Lewis E. Lehrman, who would come to national prominence in 1982 as the conservative who challenged Mario M. Cuomo in the New York gubernatorial race.

According to Jacobs, he and Lehrman hit a couple of gushers drilling for gas in Texas. They plowed their profits into venture capital—with decidedly mixed results. Jacobs did have one documented success in Analytab Products. Founded on a shoestring in 1972, Analytab was sold for $19.2 million in 1976. However, a half-dozen other Jacobs startups are known to have failed. The two most prominent—Bio-Response Inc. and Digital Recording Corp.—were noteworthy mainly for surviving for almost two decades while racking up losses of nearly $50 million.

Jacobs may have come out ahead in his 1970s dealmaking, but there's no evidence to support his privately circulated claims that he made a vast fortune in venture capital. "I remember hearing about the hundreds of millions of dollars Eli made in venture capital, but the fact is he is essentially unknown in regular venture-capital circles," says Frederick R. Adler, a prominent venture capitalist who was a director of Bio-Response. Responds Jacobs: "I'm not known in venture-capital circles because I prefer not to invest with others."

PLAY-BY-PLAY. Jacobs' partnership with Lehrman gradually came apart, undermined by what one acquaintance of both describes as "an *opera buffa*" of alternating fights and reconciliations. "I forget now the play-by-play of who was supposed to be screwing who because all sorts of things were going on all the time," he says. Lehrman declined repeated requests for an interview.

Jacobs operated solo until 1983, when he joined forces with Peter G. Peterson, who had just resigned as chief executive of Lehman Brothers Kuhn Loeb Inc. Peterson, Jacobs & Co. never really got off the ground, as relations between the two degenerated into animus. "Their relationship was like a time bomb," says Robert Duke DeForest, a former executive with several Jacobs companies.

In effect, the new firm served the purpose of plugging Peterson's prestige and capital into Jacobs' second generation of companies, among them Le Peep Restaurants Inc. Peterson paid $7.50 a share for his initial stake in the Denver-based outfit, which went public at $6.50 and now trades at 10¢ a share. Peterson declines to comment about Jacobs.

Peterson was chairman of ill-fated Westronix Inc., a circuit-board assembly company formed from the cast-off parts of Digital Recording. After racking up operating losses of $45 million, Westronix sold its assets in 1989, leaving a residue of $20.4 million in debt—most of it bank loans personally guaranteed by Jacobs. Instead of taking his loss, Jacobs set up a new subsidiary of Westronix through which he acquired Rosenbalm Aviation. The Westronix debt was rolled over onto Rosenbalm, which already carried substantial debt of its own. Jacobs piled on more debt by financing the purchase with $32 million in bank loans. The result: the money-losing Flagship Express, with more debt d ($40 million) than revenues ($25 millio the last time it reported results (the fi half of 1990).

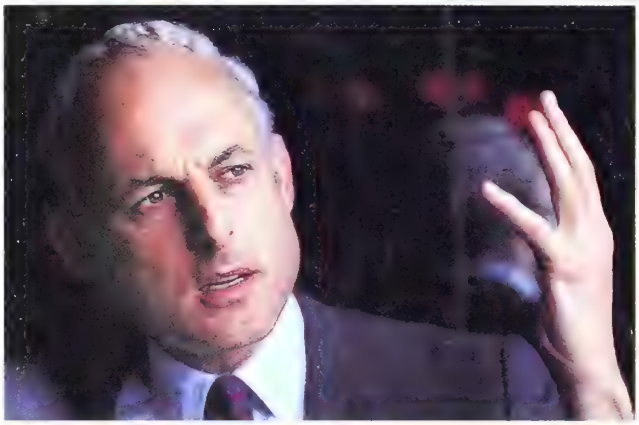
Jacobs' larger LBO properties ha fared no better. All three of the large companies in Jacobs' troubled domain Memorex Telex, Triangle Pacific, a BeefAmerica—have fallen far behi their original loan repayments and a restructuring in hopes of staving off voluntary bankruptcy.

LOW TIDE. Meanwhile, the flood tide deal fees that enriched Jacobs in t 1980s has receded. Since acquiring t Orioles, he has made only o small acquisition, and some his existing companies no lo er can afford to pay his c sulting fees. And yet Jacobs sists that he's thriving as nev before. "I have plenty of liqu ity without selling the Oriole he says.

In August, Jacobs slappe $36 million libel suit on W *field's*, a small Baltimore ma zine that ran an article diss ing his business woes. Jac libel complaint states that "is not 'in a severe cash bi nor is he confronting perso bankruptcy" and adds th *Warfield's* "was informed b knowledgeable source . . . t Mr. Jacobs has a current worth in excess of $500 r lion." The complaint reve this source as William Bla ford, a vice-president of Che cal Bank. Blackford spoke BUSINESS WEEK, too, but wo answer just two questi scripted by Jacobs' public re tions firm. The key questi "Whether Mr. Jacobs' curr net worth is in excess of number published in rec newspaper reports." Bla ford's answer: "Yes."

At the appraised value, 87% stake in the Orioles ha net worth of $195 million. His stake SyStemix is worth $140 million at c rent prices. This adds up to $335 milli As for the other corporate holdings id tified by BUSINESS WEEK, it's doubt that their net worth is sufficient ever offset Jacobs' potential liabilities Flagship Express and Le Peep. Wh pressed to account for the additio wealth he claims, Jacobs says he ow real estate and has hidden holdings many blue-chip stocks. Which on Characteristically, he won't say.

By Anthony Bianco in New York, with Amy Borrus in Washington and Joan O. Hamilton in San Francisco



■ LEWIS LEHRMAN (ABOVE) AND PETER PETERSON EACH TEAMED UP WITH JACOBS—BUT BOTH PARTNERSHIPS ENDED IN ACRIMONY

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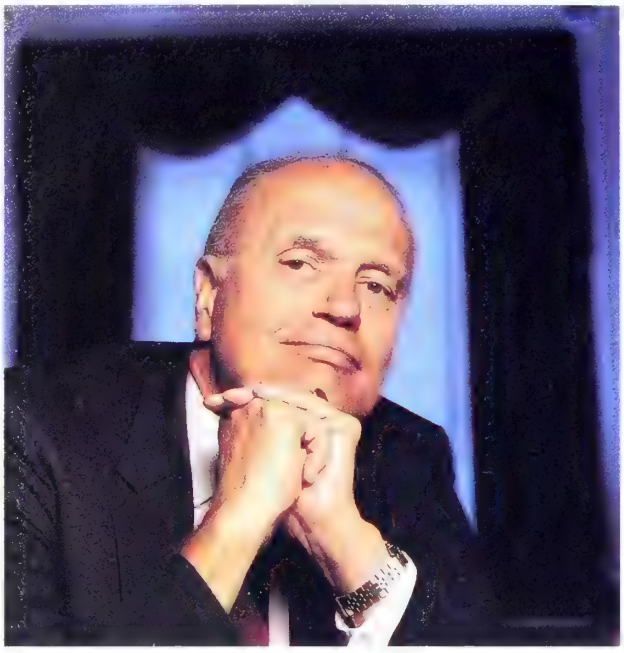
LEGISLATION

DON'T HOLD YOUR BREATH WAITING FOR BANK REFORM

After intense wrangling, the two sides are just as far apart as ever

When Nicholas F. Brady's effort to rewrite the nation's banking laws came to a crashing halt in the House of Representatives on Nov. 4, the ever-optimistic Treasury Secretary borrowed a line from Scarlett O'Hara: "Tomorrow is another day." After all, the Bush Administration won a tactical victory when the House resoundingly rejected a Democratic version of banking overhaul that would have sharply restricted banks' ability to diversify into other financial services. Despite the setbacks, Brady maintained that "true, comprehensive reform" was just around the corner.



DINGELL: PUSHING FOR TIGHT LIMITS ON NEW BANK POWERS

But broad banking reform may be gone with the wind. Brady's victory over the Democrats soured on Nov. 6, when the House Banking Committee rejected Administration pleas to try again on a bill to expand banks' powers. Instead, the panel approved a "narrow" bill tying a must-pass $30 billion Treasury loan for the Federal Deposit Insurance Corp. to tight new regulations for banks (table). Even that may be in trouble. "The White House will have to hustle for votes just to pass a strict funding bill," says Rules Committee member Representative Martin Frost (D-Tex.).

SEE-SAW? Prospects aren't much brighter in the Senate, where leaders promptly postponed their planned debate on a pro-reform bill. Senate relations with the Administration took a turn for the worse on Nov. 6, when Banking Committee Democrats killed Comptroller of the Currency Robert L. Clarke's bid for a second term as the Treasury's top banking regulator. Committee members thought Clarke was too lax at the start of the banking crisis and subsequently too harsh in regulating the industry.

The turmoil reflects a clear rejection of the White House's strategy for breaking a decade-long stalemate and finally winning authority for banks to expand into securities and insurance and set up new nationwide branch networks. Brady hoped to couple those reforms with legislation to bolster the FDIC's failing Bank Insurance Fund. He argued that banks need to expand their franchise to cu costs, boost profits, and pull themselve out of their current woes.

But that plan backfired in the House Members thought it sounded like a le thal combination of deregulation an bailout reminiscent of the 1980s savings and-loan scandal. Powerful Democrats– led by Banking Committee Chairma Henry B. Gonzalez (D-Tex.) and Energ & Commerce Committee Chairman Joh D. Dingell (D-Mich.)—argued that bank and regulators couldn't be trusted wit new powers unless they were hemme in by tight controls.

The bill written by the two chairme put such vigorous restrictions on bank new roles—for example, cutting bac rights that some institutions alread have to sell insurance and mutu funds—that in the end, no one liked i As Brady and the American Banke Assn. joined forces against the Dinge Gonzalez bill, House members "decid that the ultimate safe vote was 'no,' says lobbyist Paul A. Equale of the I dependent Insurance Agents of Ame ca. The measure died on a 324-89 vote

'NAIVE.' Bank lobbyists still see son chance that they'll prevail. Republica will press hard to bulk up the narro refunding bill with interstate branchin which won a 374-20 vote on the Hou floor. And banks believe that the mo reform-minded Senate will ultimate pass a wide-ranging bill, giving them chance to win more powers in a Hous Senate compromise. "Anything cou happen," says Susan K. Gordy, who lo bies for First Chicago Corp. "I would even give up on securities powers yet

But such hopes are "just naive," sponds House Banking member J Leach (R-Iowa). Any provisions added help banks would incite clamor by ins ers and their agents to offset the gains. And House-Senate negotiation a broad bill would give Dingell and G zalez another chance to roll back ba powers. Anything emerging from th caldron could end up being vetoed.

Instead, Congress will have its har full just saving the FDIC fund betwe now and its planned Thanksgiving journment. Without new money, FDIC has warned, it will have to cur takeovers of failing banks by yearen fraying the safety net that protects ery bank depositor. No one in Washi ton expects Congress to let bank dep tors down. But in the capital's curr sour mood, "at least 100 members of House won't vote for any bill at all this area," says Banking Commit member Jim Slattery (D-Kan.). So Brady's vision of "true, comprehens reform," tomorrow may never come.

By Mike McNamee in Washing

WHAT A NEW BANK BILL MAY INCLUDE

- Recapitalization of the FDIC's Bank Insurance Fund. Most likely: A $30 billion loan from the Treasury
- Tighter supervision for banks: Tougher exams, more independent audits, stricter accounting rules
- More power to the FDIC to close failing banks faster. Instead of waiting until it's insolvent, the FDIC could seize a bank when capital falls below 2% of assets
- Limits on the 'too big to fail' loophole, under which regulators give more protection to big banks
- Tighter rules on foreign banks, including federal approval of applications to open state-chartered offices

DATA BW

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BENCHMARKS — **INFO WORLD**

September 9, 1991

Windows Spreadsheets

	Microsoft Excel Version 3.0	Lotus® 1-2-3® for Windows™ Version 1.0
CALCULATION (all times in seconds)		
Arithmatic model		
Recalc partial	<1	2.5
Recalc all	1.6	4.3
File load	6.9	10.5 – 12.2
File size (in bytes)	243,644	219,258
Financial model		
Recalc all	11.4	34.9
Scientific model		
Recalc all	3.7	10.0
CONSOLIDATION		
Page-oriented model	5.0	<1
File-oriented model	<1	1.3

Tests performed on a COMPAQ DESKPRO 386/20e™ with 4 megabytes of RAM and 110-megabyte hard drive
Times given as ranges reflect when cursor control was returned and when the recalculation was completed

Microsoft Excel is over two times faster than 1-2-3 for Windows by virtually every measure.

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Commentary/by Judith H. Dobrzynski

CHAIRMAN AND CEO: ONE HAT TOO MANY

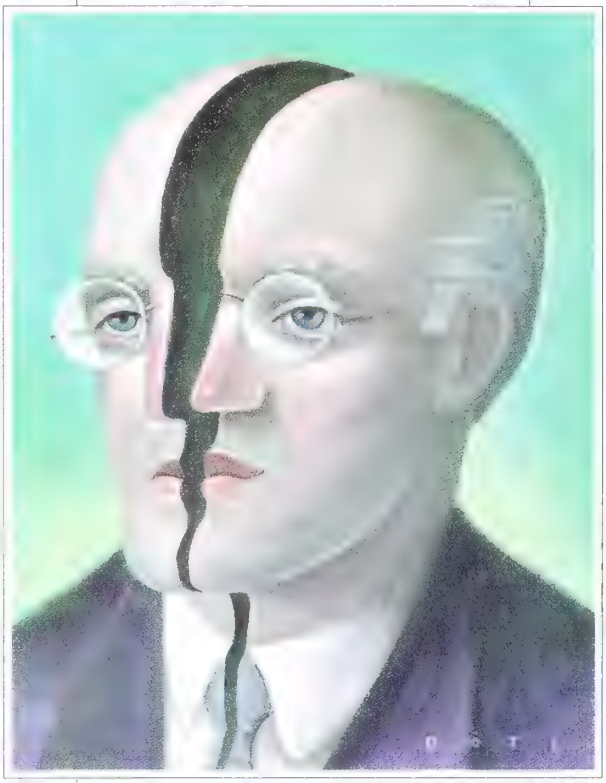
In Houston, Compaq Computer Corp., struggling through rough weather, has ousted its chief executive. In New York, Salomon Inc. is regrouping under new management after revealing its employees' illegal bidding in Treasury security auctions. These two seemingly unrelated events are travails that only a corporate governance expert could love. Why? They may give life to an idea that has long been a goal of boardroom reformers: splitting the job of chairman and chief executive.

At Compaq, the board was able to act speedily—firing founder Rod Canion for failing to pull the personal-computer maker out of a sales-and-profit tailspin—largely because it has a separate chairman, venture capitalist Benjamin M. Rosen. At Salomon, the board was kept in the dark long after former Chairman and CEO John H. Gutfreund learned of Salomon's transgressions. Directors didn't hear of the problem until shortly before the public did. Now, Interim Chairman Warren E. Buffett has said he would like to remain chairman after he relinquishes the CEO post.

'MY BOARD.' Most U. S. corporations function more like Salomon than Compaq. At some 80% of the companies on BUSINESS WEEK's list of America's 1,000 most highly valued corporations, one person rules the roost as chairman and chief executive. He controls the meetings of directors, who are theoretically monitoring his performance on behalf of shareholders. It's no wonder CEOs often confuse who works for whom. As John Nash, president of the National Association of Corporate Directors, put it recently: "Their attitude is, 'It's my company and it's my board.' They don't get it that it's not."

To remedy that attitude, many governance experts prescribe a job split. "The CEO should not be chairman of the board," says Harold M. Williams, former chairman of the Securities & Exchange Commission. "Control of the agenda and pace of the meeting is a powerful control." Harvard business school Professor Jay W. Lorsch calls a split "the single most significant thing to do." In *Pawns or Potentates*, he argues that a change would reinforce directors' independence, help prevent corporate crises, and underscore the notion that managers serve at the pleasure of the board, not vice versa.

Trouble is, getting a CEO to give up his almighty perch is hard, especially when no one has really studied whether companies work better with nonexecutive chairmen. Yet common sense says the idea has merit. As Compaq showed, troubled times can demand tough action that a nonexecutive chairman can best direct: You can hardly blame a CEO for refusing to recognize the need for new talent at the top.



Even in normal times, boards could function better if someone other than the CEO supervised board business. Outside directors admit privately that they often don't have the necessary information to ask the right questions, raise the right issues, or make the right judgments. Buffett, often called "the sage of Omaha" (where he is chairman and CEO of Berkshire Hathaway Inc.), has described the information gap with an analogy: "As Henry Kissinger once said about the State Dept. memos, they give you three options: The first leads to nuclear war, the second to unconditional surrender, and the third is what they want you to choose." In general, Buffett has said "things will come to light with a nonexecutive chairman." (Buffett is unlikely to give up the chair at Berkshire, since with a 45% stake, he would be in control no matter what his title.)

> Splitting the job might reinforce directors' clout and prevent corporate crises

WORTH TRYING. Nonexecutive chairmen wouldn't run companies but would merely manage board business. They would consult with the CEO to set a meeting's agenda, see that directors get requisite information on time, then run the meeting. They would supervise the selection of new directors and make committee assignments. And they would ensure that outside directors regularly evaluate the CEO's performance. As Rose says: "The last thing I want to do is be a manager."

Splitting the jobs of chairman and CEO is no panacea. It hasn't always worked well. A few years back, RJR Nabisco had a nonexecutive chairman: Charles E. Hugel, then CEO of Combustion Engineering Inc. But that didn't stop CEO F. Ross Johnson from wasteful ways or from trying to buy RJR with a lowball bid.

Such instances don't mean the idea isn't worth trying, though. Much will always depend on the personalities involved, the CEO's managerial style, and the board's culture. But there seems to be no cogent argument that it would hurt corporate performance, and it might increase the odds of getting the best from management. Compaq and Salomon have put the idea in the air. Since making the switch will take time, it's up to those who want to see better corporate governance to keep it there.

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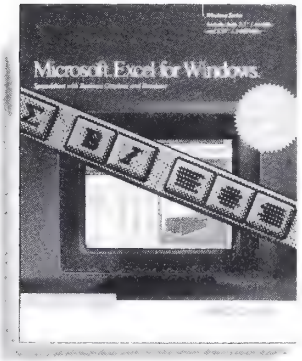

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BY GENE G. MARCIAL

DOES UJB HAVE OFFERS IT CAN'T REFUSE?

The disappearance of easily accessible credit and the collapse of junk bonds have provided relief to managements that were once in constant fear of hostile raiders. But it may not be enough to prevent New Jersey-based UJB Financial from being forced into a merger.

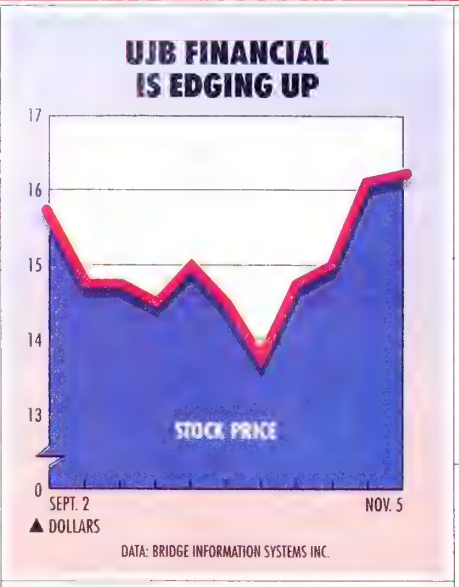
Several big investors in the nation's 49th-largest bank-holding company (assets of $13 billion) are losing patience with current management. A group that has accumulated a 9.9% stake, led by money manager Neil Weisman, has formally urged UJB's board and Chairman T. Joseph Semrod to consider merging with another bank. Otherwise, says a filing with the Securities & Exchange Commission, it may seek to throw the directors out so it can pursue a merger or sell the company.

What's behind the group's aggressive stance? Weisman, president of Chilmark Capital, declined comment. But in its filing with the SEC, the Weisman group argued that it's prepared to join a third party, if necessary, to attain its objective. It urged the board to form a committee to discuss a merger.

Whispers are that the Weisman group is aware of interest from other banks about buying or merging with UJB. One big investor says that at least four major bank-holding companies are strongly interested: Bank of New York, PNC Financial, First Fidelity Bancorp, and CoreStates Financial. These companies are believed to have separately, though only informally, approached officers of UJB or the Weisman group. If so, the board may have to consider a merger. UJB Vice President Barrie MacKay said the board will "take whatever action is appropriate to enhance shareholder value." But he declined comment on whether UJB has been approached by any other bank. Spokesmen for the four other companies declined comment.

ON THE MEND. The recession and the downturn in Northeast real estate have severely hurt UJB, which owns 7 banks and 10 nonbank subsidiaries with about 250 offices in New Jersey and eastern Pennsylvania. The company posted a loss of 17¢ a share in 1990, vs. earnings of $2.62 in 1989.

But the bank has been on the mend, managing to stay in the black during the first three quarters of this year. In the third quarter, UJB posted a profit of 16¢, vs. a loss of 45¢ a year ago. For the entire year, it's expected to earn 75¢ a share. Indeed, the stock has been edging up in recent weeks, to 16 from 12 in July. And one analyst thinks that in a takeover or merger, the stock would be worth at least 25.



SEQUOIA: TOWERING ABOVE THE TECHIES

High-tech stocks, big as well as small, have been sorry losers in recent months as investors have turned their attention—and their bucks—toward the biotechs. But don't count them all out. One techie that has been quite hot—and has withstood the group's pullback—is Sequoia Systems, a designer and maker of high-performance multiprocessor computers for on-line processing and other interactive operations. Sequoia's stock, at 11 in July, has climbed to 17.

One reason for Sequoia's strength is its impressive gains in fiscal 1991, ended on June 30. Profits for the year jumped 58% on a 30% sales increase. And in fiscal 1992's first quarter, earnings leaped 37% on an additional 30% gain in sales. Casey Stern, an analyst at Starr Securities, sees Sequoia's earnings of 78¢ a share for 1991 continuing to strengthen, to $1.10 in fiscal 1992 and $1.50 in fiscal 1993.

And that's not all. Sequoia has lined up strategic alliances with several big companies, including Hewlett-Packard, which owns a 9% stake in Sequoia, as well as with Toshiba and Sumitomo Electric Industries. The Japanese alliances alone "will generate incremental revenues of at least $25 million over the next three years," says Stern. Toshiba and Sumitomo will provide money and manpower to develop Sequoia's "fault-tolerant" computer technology which allows for programming errors.

Sequoia's systems are used in weather analysis, telephone switching, call forwarding, and missile tracking. The technology will be marketed in Japan by Toshiba and Sumitomo.

Stern, who expects Toshiba and Sumitomo to eventually buy equity stakes in Sequoia, is forecasting that its shares will double in 12 months.

ONCE AGAIN, THE FOCUS IS ON FERRO

How often can a stock turn up as a takeover play? Often, in the case of Ferro, the worldwide maker of specialty materials, such as coatings, ceramics, and plastics. The company was a buyout target in 198 and again in 1989, when Jon Huntsman, chairman of Huntsman Chemical, began accumulating shares, which helped send the stock to a high of 4 Then, Huntsman suddenly bailed out and other big stakeholders followed suit. The stock fell as low as 17.

As late as August of this year, some big investors continued to cut their positions. The State of Wisconsin Investment Board slashed its ownership under 5% from 6%. And Phil Frost chairman of drugmaker Ivax, also cut his holding, to 6% from 8%.

But Ferro has rebounded since the closing at 34 on Nov. 5—up from 26 September. Why? Another round of takeover talk. One New York money manager is convinced that Ferro is a target. He says that Great Lakes Chemical, a major maker of specialty chemicals, is eyeing Ferro. This pundit figures Ferro is worth $50 a share in a takeover deal, especially since third-quarter earnings came out strong, at 56¢ a share, vs. 37¢ a year ago and a $1.19 loss in the second quarter of 1991. "The fit between the products and operations of Great Lakes and Ferro is unusually good," he notes. A spokesman for Great Lakes, which owns 40% of Huntsman Chemical, says the company is always looking for opportunities but declined to comment on Ferro. A Ferro spokesman says Ferro's stock has been rising because of buy ratings by six brokerages. He declined comment on takeover rumors.

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THE PROFIT REBOUN

DESPITE A RECOVERY IN GNP, EARNINGS SLUMPED—AND EVEN WHEN SALES PICK

The economy may have grown at an annual rate of 2.4% in the third quarter, but the long-awaited recovery in corporate profits was nowhere in sight.

Despite forecasts that earnings would begin to snap back in the second half of 1991, third-quarter profits slipped 22% compared with last year's quarter. The decline was nearly as large as the hefty 23% drop in second-quarter earnings. Sales for the 900 companies in BUSINESS WEEK's Corporate Scoreboard remained even with year-ago levels, according to Standard & Poor's Compustat Services Inc. For the first nine months of 1990, earnings declined 17%, while sales inched ahead 2%.

This third quarter marks a doleful second anniversary: The slide in corporate profits began in the third quarter of 1989, a year before the recession officially started. Lackluster consumer demand and intense competition from both domestic and foreign producers were taking their toll on corporate profits even before the economic downturn began in earnest. Although gross national product was expanding in the third quarter of this year, companies were still suffering a squeeze on profit margins. Net margins withered to 3.4% in the quarter, from 4.4% a year earlier, and to 3.8% for the first nine months of 1991, from 4.7%.

The pressure on margins is likely to continue, regardless of whether the economy slips back into recession. "There isn't much difference between sluggish growth and recession when it comes to corporate profits," says Mark Zandi, managing director of Regional Financial Associates, an economic consulting firm in West Chester, Pa. "Companies are still feeling the pain."

SILENT SHOPPERS. Earlier this year, many economists were anticipating a rebound in corporate earnings by the fourth quarter of 1991 at the latest. But most forecasts are now calling for profits to pick up steam next year. That's because many companies are taking advantage of the weak economy to restructure their operations and clean up their balance sheets. Without these write-offs, third-quarter profits declined 10.7%, according to Zacks Investment Research. "Cost-cutting is causing a lot of pain, but it's setting the stage for higher margins when the recovery takes hold," says Stephen S. Roach, senior economist at Morgan Stanley & Co.

Those greater operating efficiencies could well be the only thing propelling an improvement of corporate profits next year, because consumer demand isn't likely to add much spark. With high levels of debt and fears of unemployment continuing to shadow households, Roach and many other economists aren't expecting consumers to go on a spending binge even when the economy gets back on track.

Against that backdrop, the recovery

WINNERS AND LOSERS

THE INDUSTRIES

THE SHARPEST GAINS	Percent change from 1990's third quarter	THE DEEPEST DRO	Percent chang 1990's third
MISCELLANEOUS LEISURE	682%	CARS & TRUCKS	
GAS, OIL & TRANSMISSION	616	TELECOMMUNICATIONS	
TRUCKING & SHIPPING	162	ELECTRICAL PRODUCTS	
BUSINESS MACHINES & SVCS.	69	BANKS–WEST & SOUTHWEST	
FOOD PROCESSING	68	BROADCASTING	
TOBACCO	47	STEEL	
FOOD RETAILING	47	RAILROADS	
HOTEL & MOTEL	33	MACHINE & HAND TOOLS	
HEALTH CARE SERVICES	26	CONGLOMERATES	
PETROLEUM SERVICES	24	SEMICONDUCTORS	
GLASS CONTAINERS	24	COMPUTERS & PERIPHERALS	
DRUGS & RESEARCH	21	ALUMINUM	
INSURANCE	19	OTHER METALS	
CONSTRUCTION & ENG.	18	FOREST PRODUCTS	
MEDICAL PRODUCTS	18	SPECIAL MACHINERY	

ALL-INDUSTRY AVERAGE: -22%

HAT NEVER WAS

M LINES WILL BE SLOW TO IMPROVE

orate earnings is likely to be muted. i expects profits to grow 18% on a over-year basis from the fourth ter of 1991 until the fourth quarter 92. This would represent the weak- ebound in corporate earnings since d War II, says Zandi. During the var period, he says, the average gain in profits in the year following the end of a recession has been 43%.

Similarly, Susan Lakatos, a vice-president at Kidder Peabody & Co., expects profits for companies in the Standard & Poor's 500-stock index to climb by 17% in 1992. And she doesn't think looser monetary policy can do much to brighten the picture this year if corporations continue to lay off workers and take write-offs in the fourth quarter. "The service economy is in the midst of a major restructuring," says Lakatos. "This reduces the stimulative effect of interest-rate cuts. We're getting less bang for the buck out of the Fed."

Among the companies taking massive write-offs in the third quarter was AT&T, whose $1.8 billion loss was the largest of any company. AT&T took $4 billion in charges to cover the costs of its recent merger with computer maker NCR and to reorganize its phone-equipment operations. Without the special charges, AT&T would have earned $848 million in the quarter. Westinghouse Electric reported a $1.48 billion loss—second only to AT&T's—after setting aside $1.7 billion to dispose of assets in its financial-services unit and taking a $160 million charge to eliminate jobs. General Motors had the third-largest loss, $1.06 billion, as a much-hoped-for rebound in auto sales failed to materialize, despite new models from both GM and Ford.

The companies earning the most in the quarter were tobacco-and-food giant Philip Morris, with $1.13 billion in profits; Exxon, with $1.11 billion; and General Electric, with $1.04 billion.

SLOW VEHICLES. A mixed bag of leisure-group companies was the sector logging the sharpest earnings gain, up 682% in the quarter. The group was buoyed by improved performance at photography giant Polaroid. Its third-quarter net income of $582 million includes a $925 million pretax gain from a lawsuit settlement with Eastman Kodak. Other groups showing big gains in the third quarter were utilities involved in gas and oil transmission, up 616%; trucking and shipping, ahead 162%; and business machines and services, up 69%.

The industry sector that reported the largest decline was the car and truck group, which posted a $1.73 billion loss. All Big Three auto makers remained in the red during the third quarter, as weak consumer confidence led to a 12.5% decline in sales of cars and light trucks. However, auto executives remain hopeful that pent-up consumer demand will soon lead to rising sales. "We think the market is about to turn," says Lee A.

D-QUARTER PROFITS

THE COMPANIES

MADE THE MOST		WHO LOST THE MOST	
	Millions of dollars		Millions of dollars
RRIS	$1,131	AT&T	$1,799
	1,115	WESTINGHOUSE ELECTRIC	1,482
LECTRIC	1,042	GENERAL MOTORS	1,057
	582	CITICORP	885
YERS SQUIBB	563	TEXAS UTILITIES	735
	552	TENNECO	643
GAMBLE	536	FORD MOTOR	574
	504	ALLIED-SIGNAL	540
	462	SECURITY PACIFIC	509
A	456	UNION PACIFIC	406
	401	TUCSON ELECTRIC POWER	366
	399	FIRST INTERSTATE BANCORP	208
HOME PRODUCTS	385	CONTINENTAL BANK	185
NTIC	383	CBS	169
H	379	NATIONAL SEMICONDUCTOR	168

DATA: STANDARD & POOR'S COMPUSTAT SERVICES INC.

Iacocca, chairman of Chrysler Corp.

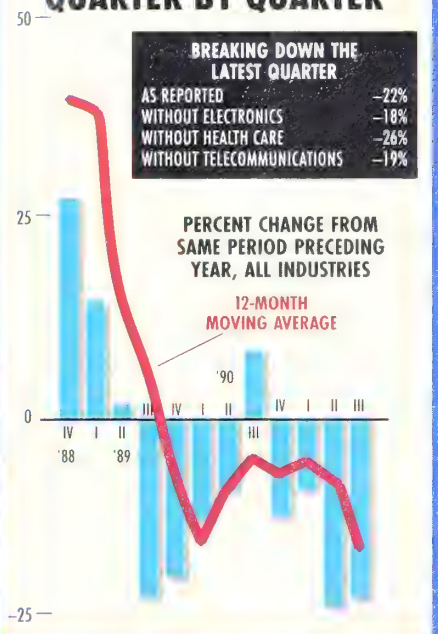
Telecommunications equipment and services posted the second-largest loss of any sector, $1.5 billion, thanks to the restructuring charges at AT&T. Similarly, the electrical products group was pulled into the red to the tune of $1.3 billion by Westinghouse's loss. Other groups that were awash in red ink during the third quarter included broadcasting, steel, and West and Southwest banks, hit by bad real estate loans.

Even when the economy starts chugging along—as many analysts believe it will by next fall's Presidential election—the impact on corporate earnings will be restrained. Companies will still need time to wring out the excesses of the 1980s. Financial-services companies will not digest their bad real estate loans quickly, and the service sector will not bring its overhead into line with revenues overnight. As a result, when the rebound in corporate earnings finally does arrive some time next year, instead of yelps of joy, you'll probably hear a muted sigh of relief in boardrooms across the country.

By Monica Roman in New York, with David Woodruff in Detroit

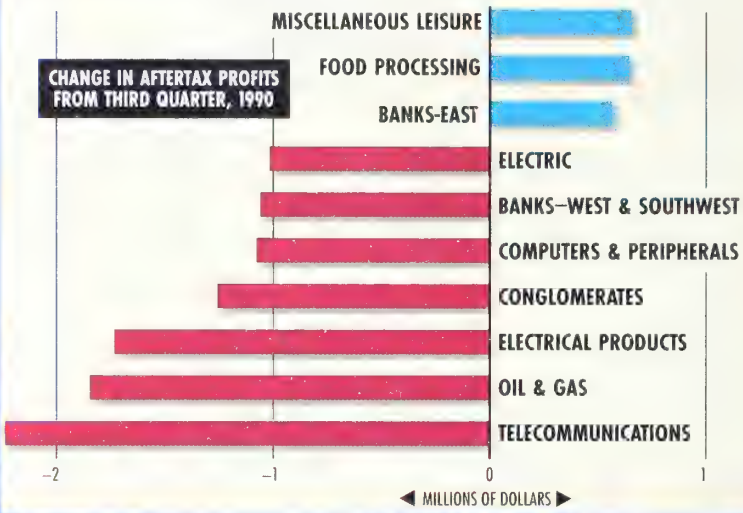
A SPOTLIGHT ON THIRD-QUARTER PROFITS

AFTERTAX PROFITS, QUARTER BY QUARTER



INDUSTRY GROUPS WITH THE BIGGEST DOLLAR CHANGE IN THE QUARTER

The second quarter was bad; the third is little better. The comeback of Eastern banks may be a bit surprising, in view of the bad news from Citicorp, while AT&T's adjustments for the NCR merger hit telecommunications hard



HOW KEY INDUSTRIES PERFORMED FOR NINE MONTHS

DATA: STANDARD & POOR'S COMPUSTAT SERVICES IN

CORPORATE SCOREBOARD

THIRD QUARTER 1991

SSARY

s: Includes all sales and other operating ues. For banks, includes all operating ues.
ts: Net income before extraordinary . For banks, profits are net income after ty gains or losses.

Margins: Net income from continuing operations before extraordinary items as percent of sales
Return on common equity: Ratio of net income available for common stockholders (most recent 12 months) to latest available common equity, which includes common stock, capital surplus, and retained earnings.

Price-earnings ratio: Based on Oct. 25, 1991, common stock price and corporate earnings from continuing operations before extraordinary items for most recent 12-month period.
Earnings per share: For most recent 12-month period. Includes all common-stock equivalents.

MPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY		
	3RD QUARTER 1991 $ MIL.	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL.	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL.	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	PRICE-EARNINGS RATIO 10-25	12 MONTHS' EARNINGS PER SHARE
-INDUSTRY APOSITE	**912456.6**	**0**	**2738573.0**	**2**	**30833.8**	**-22**	**104142.8**	**-17**	**3.4**	**4.4**	**9.8**	**22**	**1.77**
ROSPACE													
ISTRY COMPOSITE	**27567.4**	**4**	**80574.2**	**3**	**982.9**	**-21**	**2735.8**	**0**	**3.6**	**4.7**	**11.2**	**13**	**3.41**
ing	7657.0	7	21561.0	5	401.0	6	1164.0	9	5.2	5.3	19.6	11	4.31
Corp (1)	480.0	4	1413.0	11	5.0	150	16.0	-54	1.0	0.4	16.0	11	0.98
eral Dynamics	2091.0	-8	6418.0	-9	64.0	7	308.0	NM	3.1	2.6	-12.6	NM	-5.34
mman	1006.6**	0	2897.3	-1	22.7	-11	74.8	9	2.3	2.5	9.6	7	2.65
kheed	2384.0	3	7050.0	1	81.0	-6	205.0	-13	3.4	3.7	12.7	9	4.80
tin Marietta	1436.8	-4	4405.0	-4	100.1	-8	269.1	0	7.0	7.3	19.0	8	6.58
onnell Douglas	4467.0**	9	13671.0	15	78.0	-69	216.0	-25	1.7	6.1	5.7	13	5.37
throp	1555.1	22	4126.9	4	53.8	27	129.3	-23	3.5	3.3	15.9	7	3.66
r Industries (5)	405.1	27	1064.4	26	11.2	61	25.9	128	2.8	2.2	6.9	13	1.74
dstrand	405.5	6	1215.5	5	27.4	-17	59.8	-28	6.8	8.6	14.7	12	2.58
flex	116.0**	13	345.3	5	5.9	3	21.3	3	5.1	5.6	14.5	19	1.75
kol (6)	289.5	-1	952.8	4	13.2	14	43.4	26	4.6	3.9	16.9	7	2.81
ed Technologies	5273.8**	-1	15454.2	-2	119.5	-50	203.1	-65	2.3	4.5	6.4	17	2.76
TOMOTIVE													
ISTRY COMPOSITE	**66868.8**	**-4**	**204157.3**	**-7**	**-1591.2**	**NM**	**-4900.4**	**NM**	**NM**	**NM**	**-11.3**	**NM**	**-3.85**
S & TRUCKS UP COMPOSITE	**59027.2**	**-5**	**181187.5**	**-7**	**-1727.1**	**NM**	**-5018.9**	**NM**	**NM**	**NM**	**-12.9**	**NM**	**-4.76**
ysler	7500.0	15	21100.0	-8	-82.0	NM	-635.0	NM	NM	NM	-10.1	NM	-2.67
l Motor	21116.7	-8	66304.3	-10	-574.4	NM	-1782.3	NM	NM	0.4	-11.2	NM	-4.87
eral Motors	28936.0**	-6	89451.5	-5	-1056.7	NM	-2524.2	NM	NM	NM	-15.0	NM	-7.49
ristar International (2)	861.0	-11	2643.0	-8	-31.0	NM	-98.0	NM	NM	0.6	-27.9	NM	-0.54
car	613.5	-8	1688.7	-18	17.0	21	20.6	-64	2.8	2.1	2.6	57	0.77
TS & EQUIPMENT UP COMPOSITE	**4563.8**	**-3**	**13675.3**	**-6**	**39.0**	**-18**	**35.4**	**-89**	**0.9**	**1.0**	**0.4**	**NM**	**-0.08**
in Industries	419.2	-2	1252.7	-1	8.1	-20	14.6	-37	1.9	2.3	4.7	24	0.89
mins Engine	850.9	3	2540.0	-1	-11.8	NM	-63.3	NM	NM	NM	-39.2	NM	-13.19
a	1124.2	-11	3409.9	-15	5.0	-70	11.7	-84	0.4	1.3	1.6	73	0.38
aldson (5)	113.6	4	344.8	8	5.7	11	16.9	3	5.0	4.7	17.3	16	2.51
le-Picher Industries (1)	151.6	-12	444.9	-15	-12.4	NM	-18.2	NM	NM	5.4	NM	NM	-1.51
n	842.0	-3	2515.0	-9	21.0	-38	34.0	-75	2.5	3.9	6.3	31	2.04
in (4)	427.9	0	1264.6	3	12.1	-10	30.6	-9	2.8	3.2	6.4	16	0.75
dine Mfg. (9)	132.7	12	381.1	12	7.4	3	15.9	-24	5.6	6.0	14.6	12	2.04
th (A.O.)	213.8	-5	656.4	-10	1.4	-77	2.2	-91	0.7	2.7	2.1	26	0.72
ndard Motor Products	135.3	2	416.5	6	1.9	-24	7.8	16	1.4	1.9	5.6	18	0.67
ndard Products (6)	152.6	9	449.4	-5	0.7	NM	-16.7	NM	0.4	NM	-18.5	NM	-1.87
& RUBBER UP COMPOSITE	**3277.9**	**0**	**9294.5**	**-3**	**96.9**	**NM**	**83.1**	**58**	**3.0**	**NM**	**5.3**	**44**	**1.21**
dag	150.7	-2	420.8	-1	22.5	7	54.0	-3	14.9	13.7	28.5	21	5.54
per Tire & Rubber	288.9	21	747.0	9	22.1	31	53.9	15	7.6	7.1	17.6	23	1.77
dyear Tire & Rubber	2838.3	-2	8126.6	-4	52.3	NM	-24.8	NM	1.8	NM	-0.7	NM	-0.22

d quarter ending Aug. 31. (2) Third quarter ending July 31. (3) Fourth quarter and most recent six months ending Sept. 30. (4) Fourth quarter and most recent six months ending 1. (5) Fourth quarter and most recent six months ending July 31. (6) First quarter and most recent six months ending Sept. 30. (7) First quarter and most recent six months ending 1. (8) First quarter and most recent six months ending July 31. (9) Second quarter and most recent six months ending Sept. 30. (10) Second quarter and most recent six months end- g. 31. (11) Second quarter and most recent six months ending July 31. *Sales include excise taxes. **Sales include other income. ***Sales include excise taxes and other income ues from major subsidiaries not included in consolidated sales. Earnings per share are for latest 12 months, not necessarily for end of most recent fiscal year; they include all com- ck equivalents but exclude extraordinary items. NA = not available. NM = not meaningful.

DATA: STANDARD & POOR'S COMPUSTAT SERVICES INC

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS	MONTH'S EARNINGS P SH
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	RATIO 10-25	
3 BANKS													
INDUSTRY COMPOSITE	**52505.2**	**-8**	**159331.3**	**-8**	**1151.1**	**-35**	**6432.9**	**-22**	**2.2**	**3.1**	**5.4**	**23**	**1.**
(a) **BANKS - EAST**													
GROUP COMPOSITE	**28722.6**	**-11**	**86912.5**	**-13**	**454.8**	**NM**	**2229.1**	**-7**	**1.6**	**NM**	**2.0**	**60**	**0.**
Bank of Boston	1144.1	-5	3258.8	-25	18.1	NM	-127.9	NM	1.6	NM	-26.9	NM	-4.
Bank of New York	1032.2	-23	3236.7	-20	58.8	-17	56.1	-77	5.7	5.2	3.6	24	1.
Bankers Trust New York	1643.0	-19	5188.0	-14	185.0	9	530.0	-2	11.3	8.4	22.7	8	7.
Chase Manhattan	2882.0	-10	8856.0	-13	136.0	NM	385.0	NM	4.7	NM	12.1	5	3.
Chemical Banking	1787.8	-10	5303.2	-12	131.6	NM	312.6	41	7.4	NM	9.6	7	3.
Citicorp	7727.0	-16	23592.0	-19	-885.0	NM	-781.0	NM	NM	2.4	-16.6	NM	-3.
CoreStates Financial	608.9	-7	1837.0	-4	60.6	-3	167.4	-10	10.0	9.6	6.6	25	1.
First Fidelity Bancorporation	679.4	-15	2094.8	-10	55.3	-21	163.4	NM	8.1	8.8	14.3	9	3.
Fleet/Norstar Financial Group	1278.9	32	3128.5	1	9.1	-71	62.4	NM	0.7	3.2	0.5	NM	-0.
KeyCorp	634.4	44	1698.4	33	52.1	40	135.0	22	8.2	8.4	13.5	11	3.
Manufacturers Hanover	1651.0	-16	5179.0	-11	77.0	0	230.0	12	4.7	3.9	3.6	21	1.
Mellon Bank	788.0	-6	2362.0	-11	70.0	6	208.0	-24	8.9	7.8	4.0	31	1.
Meridian Bancorp	289.2	-8	925.9	-2	26.0	NM	82.9	188	9.0	NM	14.3	8	2.
Midlantic	485.7	-19	1526.1	-20	-23.9	NM	-462.1	NM	NM	NM	-60.8	NM	-12.
MNC Financial	454.7	-45	1796.2	-26	-59.5	NM	12.2	NM	NM	NM	-16.6	NM	-2.
Morgan (J.P.)	2655.0	8	7815.0	0	341.0	48	845.0	45	12.8	9.4	18.8	12	5.
PNC Financial	1167.0	-6	3454.0	-6	107.3	92	289.2	21	9.2	4.5	4.2	34	1.
Republic New York	614.3	-13	1925.9	-4	58.1	6	169.1	11	9.5	7.7	13.7	11	3.
Shawmut National	558.9	-18	1766.9	-16	2.3	-80	-173.1	NM	0.4	1.7	-37.8	NM	-5.
State Street Boston	321.2	-5	1018.8	6	27.3	-9	111.0	29	8.5	8.8	18.5	15	3.
UJB Financial	320.0	-17	949.3	-7	7.8	NM	13.7	21	2.4	NM	-0.7	NM	-0.
(b) **BANKS - MIDWEST**													
GROUP COMPOSITE	**8794.2**	**-6**	**26766.5**	**-4**	**575.9**	**-18**	**2081.2**	**7**	**6.5**	**7.5**	**10.9**	**14**	**2.**
AmeriTrust	281.7	-17	861.5	-10	15.2	9	41.4	NM	5.4	4.1	-7.1	NM	-1.
Banc One	961.0	8	2855.5	11	133.9	23	385.2	22	13.9	12.3	16.0	14	3.
Boatmen's Bancshares	394.4	3	1187.7	6	39.1	13	111.4	11	9.9	9.1	11.1	11	4.
Comerica	349.9	2	1051.3	4	38.3	7	111.5	7	10.9	10.4	14.1	9	4.
Continental Bank	532.0	-26	1750.0	-26	-185.0	NM	-123.0	NM	NM	5.6	-11.7	NM	-2.
First Bank System	456.2	-14	1370.4	-16	50.2	42	136.2	45	11.0	6.7	13.5	12	1.
First Chicago	1182.9	-17	3666.4	-14	24.6	-32	131.4	-32	2.1	2.6	6.3	11	2.
First of America Bank	359.7	2	1074.1	6	36.0	8	98.7	1	10.0	9.5	13.2	8	3.
Firstar	314.6	0	938.9	2	34.5	11	98.9	10	11.0	9.9	13.8	11	4.
Huntington Bancshares	303.5	-5	914.8	-3	30.1	NM	85.3	47	9.9	0.7	13.8	11	1.
Manufacturers National	284.7	-4	878.3	2	30.7	5	88.0	13	10.8	9.8	14.6	9	3.
Michigan National	274.0	-11	825.5	-11	18.3	119	31.5	-31	6.7	2.7	4.6	16	2.
National City	643.8	-4	1962.0	-2	60.2	-8	167.6	-15	9.3	9.7	11.7	12	3.
NBD Bancorp	643.1	-6	1951.8	-2	70.0	0	205.9	1	10.9	10.3	14.2	11	3.
Northern Trust	310.6	-8	952.8	-3	31.2	3	94.3	11	10.0	9.0	18.3	14	3.
Norwest	1101.2	4	3311.0	7	104.1	22	289.6	109	9.5	8.1	12.0	17	1.
Society	401.0	-7	1214.5	-5	44.5	11	127.5	9	11.1	9.3	15.6	9	4.
(c) **BANKS - SOUTH & SOUTHEAST**													
GROUP COMPOSITE	**6766.9**	**-4**	**20562.1**	**-1**	**380.4**	**-1**	**1323.3**	**-10**	**5.6**	**5.4**	**9.0**	**15**	**2.**
Barnett Banks	817.5	-2	2484.2	2	37.0	131	84.5	-6	4.5	1.9	3.6	37	0.
C&S/Sovran	1223.4	-8	3750.2	-5	-50.8	NM	44.0	-80	NM	2.6	1.3	NM	0.
Crestar Financial	291.3	-10	922.0	-1	2.3	-90	26.5	-56	0.8	7.5	3.3	23	0.
First Union	1074.9	6	3113.4	4	75.3	-11	229.8	-8	7.0	8.3	9.7	12	2.
NCNB	1612.0	-5	4959.5	1	131.1	130	401.7	20	8.1	3.4	11.4	10	3.
Signet Banking	308.1	-16	953.3	-12	11.2	148	25.9	-25	3.6	1.2	4.3	17	1.
SunTrust Banks	832.6	-2	2539.2	0	93.7	6	275.2	4	11.2	10.4	14.8	12	2.
Wachovia	607.0	-4	1840.3	-1	80.6	7	235.7	6	13.3	11.9	15.3	13	4.
(d) **BANKS - WEST & SOUTHWEST**													
GROUP COMPOSITE	**8221.5**	**-4**	**25090.2**	**-1**	**-260.1**	**NM**	**799.3**	**-67**	**NM**	**9.3**	**4.5**	**25**	**1.**
Bancorp Hawaii	255.1	1	769.8	12	28.5	15	82.6	17	11.2	9.9	16.0	11	3.
BankAmerica	3048.0	-2	9215.0	2	285.0	21	839.0	26	9.4	7.5	15.3	9	4.
First Interstate Bancorp	1259.6	-20	3963.3	-13	-207.5	NM	-228.2	NM	NM	9.8	-8.2	NM	-2.
Security Pacific	1289.4	4	3837.7	3	-508.5	NM	-365.3	NM	NM	10.9	-18.5	NM	-6.
U.S. Bancorp	503.1	-3	1510.7	1	51.4	2	142.9	-1	10.2	9.7	13.6	10	1.
Union Bank	412.3	0	1353.7	7	5.0	-87	76.3	-30	1.2	9.1	11.3	6	3.
Wells Fargo	1454.0	-1	4440.0	0	86.0	-47	252.0	-55	5.9	11.1	12.7	9	7.
4 CHEMICALS													
INDUSTRY COMPOSITE	**32724.9**	**-6**	**101944.9**	**-1**	**1444.8**	**-14**	**5116.3**	**-24**	**4.4**	**4.9**	**12.2**	**17**	**2.5**
Air Products & Chemicals (3)	738.4	-10	2206.5	-2	58.4	-7	188.3	4	7.9	7.7	14.1	15	4.
American Cyanamid	1118.1	6	3851.3	12	56.3	NM	292.9	471	5.0	NM	13.2	17	3.
Arco Chemical	705.0	4	2090.0	1	35.0	-38	120.0	-50	5.0	8.2	11.5	18	1.
Betz Laboratories	170.3	11	500.0	13	19.9	13	57.0	15	11.7	11.5	28.9	24	2.
Crompton & Knowles	115.1	19	340.3	18	8.4	20	27.3	20	7.3	7.3	27.1	27	1.
Dexter	228.7	1	701.7	4	-8.2	NM	3.5	-89	NM	4.7	4.0	37	0.
Dow Chemical	4502.0**	-8	14244.0	-3	223.0	-21	1034.0	-7	5.0	5.8	14.4	11	4.
DuPont	9426.0***	-5	28930.0	0	504.0	-5	1643.0	-11	5.3	5.4	12.5	15	3.

Footnotes on page 131

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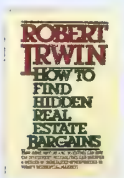

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY		
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	PRICE-EARNINGS RATIO 10-25	MO EARN P SH
Engelhard	571.6**	-35	1849.5	-19	21.2	33	65.2	33	3.7	1.8	12.3	15	1.
Ethyl	623.1	0	1915.1	4	55.3	-2	158.3	-4	8.9	9.0	20.3	14	1.
Ferro	258.7	-8	791.7	-6	11.5	43	-7.5	NM	4.4	2.8	-5.3	NM	-0.
First Mississippi (6)	139.5	3	423.0	6	5.3	23	7.7	20	3.8	3.2	3.4	30	0.
Freeport-McMoRan	413.2	-2	1209.9	2	30.9	-7	92.6	-69	7.5	7.9	17.8	28	1.
Fuller (H.B.) (1)	213.9	5	632.4	7	8.2	27	18.9	45	3.8	3.2	13.3	19	2.
Georgia Gulf	206.4	11	656.0	-7	15.6	-33	49.3	-35	7.6	10.0	NM	11	1.
Goodrich (B.F.)	649.5	2	1864.2	0	20.7	-59	26.1	-74	3.2	8.0	2.6	34	1
Grace (W.R.)	1621.6	-3	4971.9	3	49.6	10	138.0	7	3.1	2.7	11.4	15	2.
Great Lakes Chemical	320.5	20	985.7	27	39.2	11	117.8	13	12.2	13.2	19.6	22	4.
Grow Group (6)	113.6	5	330.2	2	2.4	114	-9.4	NM	2.1	1.0	-25.6	NM	-1.
Hanna (M.A.)	308.3	6	843.8	0	-26.8	NM	-17.4	NM	NM	4.6	0.4	NM	-0.
Hercules	716.8	-12	2219.3	-7	34.5	17	60.8	-35	4.8	3.6	3.4	31	1
IMC Fertilizer Group (6)	258.7	-3	847.4	-1	20.0	-13	67.9	7	7.7	8.6	13.3	13	3.
International Specialty Products	128.5	-1	403.4	4	13.0	48	40.6	43	10.1	6.8	24.9	NA	
Loctite	140.3	1	419.7	2	19.3	10	53.9	6	13.7	12.7	22.3	20	1.
Lubrizol	359.3	-2	1106.0	2	28.8	-70	91.8	-42	8.0	26.3	16.2	14	3.
Lyondell Petrochemical	1293.0	-20	4375.0	-3	33.0	-34	201.0	-29	2.6	3.1	203.0	7	3.
Monsanto	2042.0	-5	6738.0	-1	116.0	57	230.0	-55	5.7	3.5	6.6	33	2.
Morton International (6)	475.0	5	1458.2	10	34.1	1	108.6	0	7.2	7.5	12.6	18	2.
Nalco Chemical	345 8	18	985.0	14	34.7	6	100.4	5	10.0	11.2	26.2	18	1.
NL Industries	202.4	-8	644.7	-5	4.6	-74	-17.2	NM	2.3	7.9	NM	NM	-0.
Olin	551.3	-16	1680.7	-14	15.2	6	-22.9	NM	2.8	2.2	-4.1	NM	-1.
Quantum Chemical	573.0*	-8	1895.7	0	-38.1	NM	-105.7	NM	NM	NM	NM	NM	-3.
Rohm & Haas	672.1	-2	2104.7	-2	39.5	-14	133.6	-21	5.9	6.7	13.1	16	2.
Schulman (A.) (4)	152.5**	-13	524.6	2	13.0	19	32.6	14	8.5	6.2	19.2	18	2.
Union Carbide	1751.0	-10	5359.0	-7	-84.0	NM	49.0	-84	NM	4.7	1.8	59	0.
Wellman	199.1	-3	606.5	-3	10.2	-27	32.2	-36	5.1	6.8	10.8	15	1
Witco	420.4	0	1240.0	2	21.2	8	54.0	-6	5.0	4.7	11.0	14	2.
5 **CONGLOMERATES**													
INDUSTRY COMPOSITE	**37711.9**	**0**	**113174.0**	**1**	**318.1**	**-80**	**3498.8**	**-37**	**0.8**	**4.2**	**12.2**	**18**	**2.**
Allied-Signal	2877.0	-3	8827.0	-4	-540.0	NM	-388.0	NM	NM	3.5	-8.2	NM	-2.
Dart Group (11)	307.7	15	877.6	12	2.5	-21	2.0	-80	0.8	1.2	1.7	25	2.
Dial	887.3	1	2719.7	2	33.3	4	90.4	3	3.8	3.7	11.1	14	2.
Figgie International	282.9	-12	911 3	-9	5.0	-29	17.8	-43	1.8	2.2	7.4	16	1.
General Cinema (2)	520.9**	3	1735.7	4	6.3	11	62.4	12	1.2	1.1	7.1	13	1.
General Electric	14578.0**	3	42685.0	4	1042.0	2	3172.0	4	7.1	7.2	19.8	14	5.
Itel	431.9	2	1254.4	-2	-36.4	NM	-42.2	NM	NM	NM	-13.9	NM	-1.
ITT	4930.0	-2	15071.0	-1	187.0	-17	622.0	-29	3.8	4.5	NA	9	6.
LTV	1479.9	2	4469.4	-1	115.5	NM	82.6	-9	7.8	NM	NM	4	0.
National Intergroup (9)	826.3	4	2390.5	9	-9.2	NM	-22.1	NM	NM	0.2	-5.8	NM	-1.
Ogden	412.7	6	1162.4	-1	16.0	1	40.9	-32	3.9	4.1	7.5	22	0.
Pall (5)	185.9	10	529.1	17	30.2	19	71.6	21	16.3	15.1	16.4	25	1.
Penn Central	682.9	21	2024.9	26	20.8	-22	63.8	-18	3.0	4.7	5.3	15	1.
Pittway	246.1	6	720.0	4	6.9	36	16.2	-14	2.8	2.2	5.7	20	1.
Premark International	669.4	0	2031.0	4	18.3	336	54.7	126	2.7	0.6	11.1	11	2.
Teledyne	757.7	-10	2388.6	-7	-79.8	NM	-53.5	NM	NM	1.1	-10.0	NM	-0.
Tenneco	3182.0	-6	10019.0	-6	-643.0	NM	-656.0	NM	NM	2.7	-18.6	NM	-4.
Textron	1906.1**	0	5824.1	1	75.7	14	216.2	6	4.0	3.5	10.6	11	3.
TRW	1896.0	-6	5791.0	-5	32.0	-30	91.0	-45	1.7	2.3	7.0	18	2.
Whitman	651.2	2	1742.4	3	35.0	NM	57.0	NM	5.4	NM	17.2	18	0.
6 **CONSUMER PRODUCTS**													
INDUSTRY COMPOSITE	**58147.7**	**5**	**169254.8**	**8**	**3824.8**	**6**	**10584.1**	**11**	**6.6**	**6.5**	**21.4**	**20**	**2.**
(a) APPAREL													
GROUP COMPOSITE	**6035.6**	**7**	**16461.0**	**8**	**405.7**	**6**	**891.1**	**2**	**6.7**	**6.8**	**16.9**	**17**	**1.**
Brown Group (11)	417.0	-4	1275.8	-6	4.6	-12	16.3	-34	1.1	1.2	7.9	17	1.
Crystal Brands	239.0	-2	615.8	-4	10.9	-12	-27.5	NM	4.6	5.1	-7.3	NM	-1.
Fruit of the Loom	392.0	10	1209.5	8	27.2	15	79.3	8	6.9	6.6	15.1	16	1.
Hartmarx (1)	284.1	-9	896.4	-7	-16.1	NM	-23.2	NM	NM	NM	-9.6	NM	-1.
Kellwood (8)	219.5	11	615.7	10	6.8	57	12.9	494	3.1	2.2	7.3	21	1.
L.A. Gear (1)	183.8	-39	537.5	-25	-11.4	NM	-27.9	NM	NM	4.8	-18.5	NM	-1.
Leslie Fay	249.2	-7	665.2	1	18.6	21	28.8	10	7.5	5.7	14.7	11	1.
Liz Claiborne	558.4	12	1476.5	17	65.7	5	166.2	11	11.8	12.5	27.1	15	2.
Nike (7)	947.2	14	2468.3	22	114.4	15	243.7	6	12.1	12.0	29.2	13	3.
Oshkosh B'Gosh	113 8	25	284 4	16	9.4	13	24.0	9	8.3	9.2	19.4	15	2.
Oxford Industries (7)	123.0	-6	360.3	8	2.6	112	5.9	168	2.1	1.0	6.8	19	C.
Phillips-Van Heusen (11)	205.3	7	604.1	13	6.0	6	10.3	15	2.9	3.0	27.4	20	0.
Reebok International	764.3	30	2147.9	29	66.2	62	185.0	35	8.7	7.0	31.9	13	2.
Russell	228.1	18	547.9	5	20.9	0	30.5	-37	9.2	10.8	10.8	22	1.
Stride Rite (1)	165.7	12	459.7	11	18.9	14	54.0	17	11.4	11.1	30.1	18	2.
Tultex	110.3**	0	193.9	-22	7.2	-38	0.0	NM	6.5	10.5	7.9	19	0.
VF	834.8	15	2102.2	9	53.8	18	112.9	24	6.4	6.3	11.8	20	1.

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CORPORATE SCOREBOARD

MPANY	SALES				PROFITS				MARGINS				
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	RETURN ON COMMON EQUITY 12 MONTHS ENDING 9-30	PRICE EARNINGS RATIO 10-25	12 MONTHS EARNINGS PER SHARE
IANCES & HOME FURNISHINGS													
JP COMPOSITE	**6361.3**	**0**	**19199.0**	**-1**	**99.3**	**-35**	**268.7**	**-55**	**1.6**	**2.4**	**1.4**	**NM**	**0.14**
trong World Industries	635.6	-1	1865.6	-3	22.0	-22	60.2	-56	3.5	4.4	7.7	25	1.26
it City Stores (10)	634.8	15	1934.0	12	17.4	3	52.1	-18	2.7	3.1	13.9	19	1.17
g-Meyers (10)	118.8**	9	357.5	9	6.0	23	17.4	9	5.0	4.5	8.9	17	1.99
land Superstores (11)	135.6	31	591.6	-15	-63.2	NM	-83.8	NM	NM	NM	NM	NM	-4.84
co (10)	356.9	-3	1051.4	-5	-12.7	NM	-84.5	NM	NM	NM	NM	NM	-4.22
all International (6)	138.6	-4	404.9	-9	9.2	-2	21.7	-31	6.6	6.4	10.1	14	1.40
Boy Chair (8)	130.0	5	447.8	2	2.9	NM	17.5	2	2.3	NM	11.6	15	1.47
ett & Platt	279.2	-2	825.3	0	12.0	15	29.3	-18	4.3	3.7	7.3	26	1.30
o	804.0	0	2335.0	-4	30.9	-27	72.6	-58	3.8	5.2	2.1	83	0.27
tag	729.5	-7	2245.0	-4	24.2	5	58.0	-33	3.3	2.9	7.3	19	0.67
Imports (10)	191.7	28	569.1	34	5.4	111	15.0	-7	2.8	1.7	8.1	24	0.36
(5)	184.7	5	582.2	-5	-1.3	NM	15.3	9	NM	NM	6.0	18	0.81
lpool	1678.0	1	5067.0	1	48.0	-20	130.0	3	2.9	3.6	5.1	35	1.09
h Electronics	343.9	0	922.6	-11	-1.5	NM	-52.1	NM	NM	NM	-25.4	NM	-2.76
RAGES													
JP COMPOSITE	**12458.8**	**7**	**34960.0**	**8**	**1061.2**	**0**	**2986.5**	**7**	**8.5**	**9.1**	**24.5**	**22**	**1.96**
euser-Busch	2943.4	2	8330.1	3	293.0	12	780.6	11	10.0	9.0	22.6	16	3.21
vn-Forman (8)	259.3	1	806.1	10	27.8	-23	92.9	1	10.7	14.1	21.4	15	4.92
-Cola	3172.1	14	8692.6	13	456.3	16	1259.6	16	14.4	14.1	39.2	27	2.33
-Cola Bottling Consolidated	123.3	7	350.2	5	0.6	38	1.7	20	0.5	0.4	0.1	NM	-0.03
-Cola Enterprises	1079.5	1	3102.9	0	-1.9	NM	42.6	-48	NM	1.8	2.8	36	0.35
iCo	4881.3	9	13678.1	11	285.4	-19	809.1	-2	5.8	7.8	21.7	21	1.35
ONAL CARE													
JP COMPOSITE	**13028.3**	**7**	**37754.8**	**8**	**724.2**	**-25**	**2173.4**	**-9**	**5.6**	**7.9**	**25.3**	**19**	**2.89**
rto-Culver (3)	247.4	11	682.9	10	8.8	-22	22.1	-22	3.6	5.1	12.7	23	1.06
Products	865.2	4	2463.7	6	47.7	7	118.1	10	5.5	5.4	87.2	14	2.95
Drug (9)	142.2	10	410.9	13	14.4	9	42.7	13	10.2	10.3	13.9	17	3.14
ch & Dwight	123.2	14	350.5	13	7.8	8	19.9	10	6.3	6.7	21.5	25	1.25
ox (6)	417.6	4	1327.1	8	43.9	11	36.8	-69	10.5	9.8	7.3	37	1.06
ate-Palmolive	1506.4	3	4484.6	6	-146.6	NM	38.0	-85	NM	5.8	9.4	59	0.69
b	361.3	-7	937.6	-9	22.3	-5	33.8	-7	6.2	6.0	13.3	17	1.81
tte	1138.0	11	3341.5	8	104.1	13	313.1	20	9.1	9.0	42.3	21	1.90
ne Curtis Industries (10)	273.2	19	746.9	23	7.0	100	11.9	55	2.6	1.5	9.3	27	1.50
national Flavors & Fragrances	255.5	3	791.3	6	42.4	5	138.3	8	16.6	16.2	19.1	20	4.38
(8)	169.0	0	508.2	3	10.7	-2	31.4	3	6.3	6.5	17.4	13	5.19
er & Gamble (6)	7205.0	8	20722.0	9	536.0	-3	1264.0	2	7.4	8.3	29.0	17	4.87
home	172.5	11	500.8	7	11.8	14	28.2	-13	6.9	6.7	21.9	15	2.32
brands	151.8	0	486.8	1	13.8	-47	75.1	-6	9.1	17.0	38.6	24	2.25
ACCO													
JP COMPOSITE	**20263.6**	**3**	**60880.2**	**11**	**1534.5**	**47**	**4264.5**	**46**	**7.6**	**5.3**	**23.9**	**17**	**2.51**
rican Brands	3473.2**	-10	10267.4	2	187.1	-19	585.4	0	5.4	6.0	15.6	14	2.89
ro (1)	293.5***	18	816.5	10	-0.1	NM	0.3	-94	NM	0.1	NA	NA	NA
o Morris	11791.0	6	36275.0	13	1131.0	21	3226.0	21	9.6	8.4	33.0	16	4.43
Nabisco Holdings	3763.0	7	11013.0	8	123.0	NM	207.0	NM	3.3	NM	1.3	NM	0.07
ersal (6)	695.4**	8	1836.5	25	20.1	123	46.2	99	2.9	1.4	17.3	12	4.23
	247.5*	26	671.8	19	73.4	24	199.6	18	29.7	30.0	53.9	23	2.25
NTAINERS & PACKAGING													
STRY COMPOSITE	**5293.2**	**8**	**15205.2**	**9**	**159.6**	**-3**	**475.5**	**-26**	**3.0**	**3.4**	**9.4**	**19**	**1.82**
S, METAL & PLASTIC													
JP COMPOSITE	**1942.1**	**25**	**5313.1**	**36**	**70.9**	**24**	**178.3**	**17**	**3.7**	**3.7**	**12.8**	**19**	**3.21**
	644.4	83	1730.0	64	23.5	20	57.2	17	3.6	5.6	13.6	17	2.20
tar International	136.5	8	403.9	7	2.8	73	11.0	12	2.0	1.3	10.2	16	1.98
vn Cork & Seal	1050.9**	7	2932.9	32	40.8	27	102.2	19	3.9	3.3	12.7	21	4.28
kin Can	110.3	18	246.3	2	3.8	2	7.9	-8	3.5	4.0	14.1	8	3.45
ER													
JP COMPOSITE	**3351.2**	**0**	**9892.2**	**-2**	**88.7**	**-18**	**297.2**	**-39**	**2.6**	**3.2**	**8.4**	**20**	**1.52**
is	284.6	5	850.8	3	13.7	11	35.1	-1	4.8	4.6	16.7	19	1.96
ral Paper Board	341.8	15	1024.0	10	24.2	11	76.7	-20	7.1	7.4	10.4	12	2.27
view Fibre (2)	161.3	-7	471.8	-6	4.5	-75	9.3	-80	2.8	10.5	6.3	29	0.45
nua	138.4	-15	401.5	-11	2.5	-69	3.4	-80	1.8	5.0	5.6	21	1.17
oco Products	420.8	1	1250.7	1	25.1	NM	70.4	200	6.0	NM	18.4	15	2.25
e Container	1362.8	-5	4026.8	-7	-13.4	NM	-12.3	NM	NM	1.4	0.2	NM	-0.04
ple-Inland	641.5	6	1866.7	5	32.0	-43	114.7	-38	5.0	9.3	10.9	16	2.96

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTH EARNINGS PER SHA
	3RD QUARTER 1991 $ MIL.	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL.	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL.	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL.	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
8 DISCOUNT & FASHION RETAILING													
INDUSTRY COMPOSITE	**70232.8**	**11**	**213773.0**	**9**	**1396.0**	**16**	**5145.5**	**12**	**2.0**	**1.9**	**12.6**	**24**	**1.4**
Ames Department Stores (11)	689.7	30	2275.7	-21	-46.5	NM	-121.0	NM	NM	NM	NM	NM	-8.4
AutoZone (4)	313.8	31	652.5	23	21.2	70	36.6	86	6.7	5.2	23.6	34	1.3
Baker (J.) (11)	126.9	13	331.0	-1	2.0	0	3.1	-66	1.6	1.8	5.5	22	0.5
Blair	112.3	2	364.1	3	5.2	-28	21.7	-18	4.6	6.5	22.7	13	3.5
Caldor (11)	435.5	7	1419.0	NA	2.5	NM	6.3	NA	0.6	0.0	0.5	55	0.2
Carter Hawley Hale Stores (11)	495.9**	-20	1678.3	-24	-18.4	NM	-115.6	NM	NM	NM	NM	NM	-4.3
Charming Shoppes (11)	255.2	17	735.2	13	16.4	60	41.3	48	6.4	4.7	15.3	21	0.9
Consolidated Stores (11)	176.7	11	547.9	8	2.2	171	8.3	NM	1.2	0.5	5.8	53	0.1
Costco Wholesale (4)	1743.6	27	4184.1	27	32.4	48	71.0	68	1.9	1.6	13.2	36	1.1
Dayton Hudson (11)	3562.0**	10	11776.0	10	40.0	-32	309.0	-16	1.1	1.8	16.6	13	4.8
Dillard Department Stores (11)	911.2**	13	3083.7	14	35.7	24	166.1	16	3.9	3.6	13.7	22	5.3
Dollar General (11)	173.3	13	523.4	9	3.8	47	13.8	35	2.2	1.7	12.4	25	0.8
Edison Brothers Stores (11)	315.4	16	1037.2	17	11.4	6	49.7	1	3.6	4.0	17.2	12	2.8
Family Dollar Stores (4)	257.3	16	764.6	15	8.3	45	32.5	43	3.2	2.6	18.2	19	1.4
Fingerhut	308.7	11	929.7	22	8.5	11	26.6	11	2.7	2.7	15.1	15	2.0
Gap (11)	523.1	29	1638.1	21	34.2	79	131.6	77	6.5	4.7	34.3	35	1.2
Genesco (11)	118.1	1	354.9	-3	-0.2	NM	-0.4	NM	NM	0.8	-0.7	NM	-0.0
Grossman's	230.7	1	627.1	0	5.7	-16	7.9	41	2.5	3.0	-1.4	NM	-0.0
Hechinger (11)	458.1	18	1158.4	11	13.9	28	20.2	-27	3.0	2.8	5.0	17	0.6
Hills Department Stores (11)	366.8	-20	1364.1	-16	-4.0	NM	-264.9	NM	NM	NM	NM	NM	-14.1
Home Depot (11)	1352.8	37	3547.2	37	71.8	52	164.6	43	5.3	4.8	13.0	52	1.0
Home Shopping Network (4)	256.4	5	786.8	4	-1.0	NM	-21.6	NM	NM	0.6	-5.9	NM	-0.0
Jamesway (11)	207.4	-4	656.8	-5	-0.6	NM	-20.1	NM	NM	NM	-21.5	NM	-1.7
Kmart (11)	8495.0**	8	26105.0	5	163.0	10	672.0	195	1.9	1.9	14.1	11	3.8
Lands' End (11)	121.4	4	477.2	11	1.1	NM	17.6	10	0.9	NM	16.1	23	0.9
Limited (11)	1375.2**	19	4403.4	15	79.2	0	302.3	3	5.8	6.8	23.5	21	1.0
Lowe's (11)	863.0	6	2142.4	0	25.3	-16	41.8	-33	2.9	3.7	7.9	17	1.5
May Department Stores (11)	2379.0**	8	7976.0	4	82.0	5	410.0	-7	3.4	3.5	19.0	13	3.8
Melville	2300.0	14	6615.4	18	55.6	-14	113.0	-25	2.4	3.2	22.3	14	3.2
Mercantile Stores (11)	541.9**	5	1850.4	4	18.1	7	87.2	-11	3.3	3.3	10.2	12	3.2
Merry-Go-Round Enterprises (11)	156.9	26	534.9	24	6.9	27	29.6	28	4.4	4.4	21.6	16	0.8
Meyer (Fred) (11)	615.9	9	2051.5	6	11.5	34	35.1	NM	1.9	1.5	12.6	13	1.5
Neiman Marcus Group (5)	387.0**	2	1318.7	2	-8.1	NM	-1.0	NM	NM	NM	NM	NM	-0.4
Nordstrom (11)	904.1	13	2416.9	9	49.9	39	121.8	51	5.5	4.5	16.0	19	1.7
Pamida Holdings (11)	174.2	2	510.6	5	-1.3	NM	-2.3	NM	NM	1.4	-37.1	NM	-0.5
Penney (J.C.) (11)	3727.0	-3	12970.0	-1	31.0	-63	317.0	-48	0.8	2.2	11.4	14	3.5
Pep Boys-Manny, Moe & Jack (11)	261.8	12	709.4	7	11.3	-14	25.2	-19	4.3	5.6	9.3	27	0.6
Petrie Stores (11)	343.0	10	1037.8	4	4.0	126	12.3	-58	1.2	0.6	1.1	NM	0.1
Pic 'N' Save (11)	116.4	3	418.4	2	4.5	NM	27.5	146	3.9	NM	15.0	22	0.9
Price (4)	1606.4**	31	4542.5	28	34.0	7	87.0	7	2.1	2.6	17.6	21	2.6
QVC Network (11)	199.2	25	641.4	6	3.5	NM	13.9	NM	1.7	NM	-0.8	NM	-0.2
Rose's Stores (11)	330.9	-5	1108.3	-7	-3.7	NM	-31.9	NM	NM	0.1	-21.4	NM	-1.8
Ross Stores (11)	231.2	21	681.5	15	8.7	74	20.6	-5	3.8	2.6	15.3	16	0.8
Sears, Roebuck	14300.0**	2	41273.8	2	150.3	-16	592.3	15	1.1	1.3	7.4	13	2.8
Service Merchandise	656.4	0	2011.9	-1	-4.7	NM	-12.6	NM	NM	NM	369.8	10	1.0
Spiegel	399.2	-6	1263.2	4	1.6	-85	4.0	-85	0.4	2.4	8.9	19	0.7
Strawbridge & Clothier (11)	211.3**	-2	743.1	-4	-3.4	NM	10.6	-61	NM	NM	5.2	17	1.3
Tiffany (11)	119.4	11	358.5	9	7.4	4	27.0	-5	6.2	6.6	19.8	19	2.3
TJX (11)	649.5	13	1966.8	15	13.8	-4	43.9	2	2.1	2.5	25.9	14	1.0
Toys 'R' Us (11)	1056.2	10	4630.4	9	23.4	-12	283.4	-6	2.2	2.7	14.8	27	1.0
U.S. Shoe (11)	677.4	1	2058.4	-2	6.3	241	-37.5	NM	0.9	0.3	-5.6	NM	-0.6
Venture Stores (11)	339.0**	8	1133.3	5	3.9	93	34.0	15	1.2	0.7	40.4	8	2.2
Waban (11)	736.4	18	1987.7	15	9.5	39	17.3	12	1.3	1.1	8.1	21	0.8
Wal-Mart Stores (11)	10339.9	37	29979.4	34	345.9	27	1134.7	19	3.3	3.6	23.2	37	1.2
Woolworth (11)	2228.0**	2	7419.0	5	21.0	-58	183.0	-30	0.9	2.3	11.8	14	2.0
9 ELECTRICAL & ELECTRONICS													
INDUSTRY COMPOSITE	**23919.9**	**3**	**71316.0**	**5**	**-856.6**	**NM**	**1102.9**	**-66**	**NM**	**4.4**	**3.4**	**53**	**0.6**
(a) **ELECTRICAL PRODUCTS GROUP COMPOSITE**	**6266.4**	**4**	**18011.7**	**2**	**-1320.8**	**NM**	**-864.4**	**NM**	**NM**	**6.8**	**-12.0**	**NM**	**-2.0**
Cooper Industries	1508.1**	-3	4607.2	1	98.8	7	272.6	8	6.6	6.0	10.9	19	2.9
Hubbell	192.0	3	571.2	5	21.7	4	67.8	5	11.3	11.1	18.1	18	2.9
MagneTek (6)	293.8	11	887.3	7	6.7	4	27.7	-3	2.3	2.4	22.0	9	1.4
National Service Industries (4)	406.7	-6	1197.5	-4	15.9	-42	7.7	-90	3.9	6.4	4.9	34	0.6
Raychem (6)	304.2	4	944.1	7	7.4	124	-20.4	NM	2.4	1.1	-2.8	NM	-0.5
Thomas & Betts	135.6	-9	427.3	-6	10.7	110	37.3	5	7.9	3.4	14.1	18	2.9
Westinghouse Electric	3426.0	8	9377.0	2	-1482.0	NM	-1257.0	NM	NM	8.0	-37.8	NM	-5.6
(b) **ELECTRONICS GROUP COMPOSITE**	**8572.2**	**4**	**26045.9**	**7**	**266.2**	**-27**	**1063.4**	**-9**	**3.1**	**4.4**	**11.4**	**14**	**4.0**
E-Systems	496.7	13	1446.1	8	28.2	17	79.8	16	5.7	5.5	15.1	11	3.2
Harris (6)	685.9	-5	2241.3	-3	12.8	-27	70.5	-23	1.9	2.4	1.4	67	0.3
Litton Industries (5)	1370.9	-3	3990.0	1	-58.4	NM	23.9	-82	NM	3.2	4.7	31	2.8

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTHS' EARNINGS PER SHARE
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
al (9)	700.0	96	2159.2	93	29.1	39	82.2	29	4.2	5.9	11.6	9	3.77
torola	2745.0	2	8302.0	4	93.0	9	328.0	-16	3.4	3.8	9.8	19	3.30
ytheon	2235.0	0	6845.5	1	148.4	8	433.9	5	6.6	6.2	18.8	9	8.78
rian Associates (3)	338.7	2	1061.8	8	13.1	-10	45.1	925	3.9	4.4	13.7	12	2.95
TRUMENTS													
OUP COMPOSITE	**4144.6**	**0**	**12411.2**	**-1**	**172.8**	**7**	**440.0**	**20**	**4.2**	**3.9**	**12.5**	**16**	**1.87**
etek	170.5	3	531.7	8	9.5	7	27.6	-5	5.6	5.4	18.2	15	0.82
kman Instruments	208.1	4	624.2	6	10.3	7	27.7	6	5.0	4.8	11.7	14	1.30
neywell	1493.0	-4	4482.2	-3	79.1	-9	228.5	-13	5.3	5.6	20.2	12	4.73
Industries	244.5	2	759.5	2	2.2	5	8.5	-42	0.9	0.9	4.5	15	0.89
nson Controls (3)	1199.4	2	3410.7	-1	31.3	8	70.6	10	2.6	2.5	10.1	16	2.19
lipore	174.8	1	547.2	7	11.1	8	41.9	12	6.4	6.0	7.2	29	1.17
rkin-Elmer (5)	235.4	4	669.5	2	12.6	-6	-12.5	NM	5.4	5.9	-1.0	NM	-0.08
tronix (7)	288.6	5	1007.7	-7	9.6	2	36.9	NM	3.3	3.1	11.3	13	1.67
adyne	130.3	11	378.4	12	7.0	NM	10.9	NM	5.4	NM	3.2	51	0.29
ICONDUCTORS													
OUP COMPOSITE	**4936.7**	**5**	**14847.3**	**9**	**25.2**	**-70**	**463.9**	**-25**	**0.5**	**1.8**	**4.6**	**44**	**0.63**
vanced Micro Devices	289.4	14	860.5	8	17.1	NM	38.5	NM	5.9	NM	-2.2	NM	-0.20
P	736.3	-2	2304.4	2	61.6	-15	196.3	-11	8.4	9.7	14.7	20	2.48
alog Devices (2)	130.3	8	405.5	17	0.6	-89	10.9	1	0.5	4.3	-3.6	NM	-0.28
el	1187.7	17	3573.2	24	201.7	17	629.9	30	17.0	17.0	18.3	11	3.81
Logic	172.4	0	533.6	13	0.8	-81	7.4	-36	0.5	2.4	-13.1	NM	-0.91
ron Technology (4)	123.8	18	345.1	29	9.6	214	14.3	195	7.7	2.9	1.0	NM	0.13
lex (6)	187.0	10	550.5	16	14.9	-13	46.9	-7	8.0	10.0	11.3	24	1.26
tional Semiconductor (7)	411.0	-7	1242.7	-5	-168.0	NM	-156.3	NM	NM	NM	-33.4	NM	-1.57
as Instruments	1699.0	1	5032.0	5	-113.0	NM	-324.0	NM	NM	NM	-25.8	NM	-5.02
OD													
USTRY COMPOSITE	**73918.6**	**3**	**222165.1**	**5**	**2147.0**	**59**	**5781.2**	**48**	**2.9**	**1.9**	**22.8**	**18**	**2.04**
OD DISTRIBUTION													
OUP COMPOSITE	**10702.5**	**5**	**33447.4**	**6**	**123.4**	**10**	**389.2**	**11**	**1.2**	**1.1**	**14.6**	**15**	**1.97**
ming	2961.3	7	9826.4	9	26.6	23	84.7	20	0.9	0.8	11.1	10	3.32
hfood Holdings (8)	235.9	-1	779.5	0	2.5	46	8.2	68	1.1	0.7	18.2	14	0.96
kcoff-Sexton (8)	367.6	1	1087.6	2	3.2	-7	9.0	45	0.9	1.0	7.2	16	1.17
per Food Services (4)	581.0**	6	1401.5	3	4.4	-32	8.8	-35	0.8	1.2	9.6	12	1.13
per Rite (10)	251.1	8	756.1	8	2.0	45	0.8	-71	0.8	0.6	55.0	NM	0.10
per Valu Stores (10)	2718.8	2	9063.7	4	30.8	8	122.9	8	1.1	1.1	15.6	12	2.15
sco (6)	2177.4	7	6287.9	7	42.0	12	117.8	13	1.9	1.9	17.2	23	1.71
tterau (9)	1409.4**	1	4244.7	3	11.9	1	37.1	7	0.8	0.8	21.9	12	2.30
OD PROCESSING													
OUP COMPOSITE	**30945.9**	**4**	**92196.9**	**7**	**1606.8**	**68**	**4411.1**	**30**	**5.2**	**3.2**	**23.2**	**18**	**2.56**
erican Maize-Products	144.5	3	403.1	5	4.9	-26	9.4	-35	3.4	4.7	7.2	10	1.73
rden	1865.6	-4	5389.5	-6	98.9	-8	251.8	-4	5.3	5.6	18.9	13	2.40
mpbell Soup (5)	1348.2	-6	4609.8	-2	84.7	NM	296.4	NM	6.3	NM	23.1	24	3.16
nAgra (7)	5325.2	14	15014.2	22	68.7	9	233.7	29	1.3	1.4	16.4	20	2.08
C International	1486.6	2	4643.1	9	107.0	9	294.1	8	7.2	6.8	28.9	16	5.11
rtice-Burns Food (6)	216.0	-3	664.0	-3	1.1	-39	-0.3	NM	0.5	0.8	2.8	36	0.33
an Foods (7)	531.3	3	1616.5	2	16.9	7	56.8	13	3.2	3.1	17.7	16	1.81
le Food	898.3	2	2516.2	8	25.8	-41	104.7	4	2.9	5.0	12.4	17	2.09
wers Industries (6)	192.3	2	633.2	0	3.7	-16	18.6	-31	1.9	2.3	11.3	20	0.69
neral Mills (7)	1916.5	10	5493.4	9	142.1	15	364.3	22	7.4	7.1	39.7	20	2.93
rber Products (9)	315.3	7	910.3	1	35.6	12	91.8	6	11.3	10.8	28.4	20	3.18
inz (H.J.) (8)	1500.3	-4	4943.5	6	254.4	78	539.4	36	17.0	9.2	29.9	15	2.54
rshey Foods	765.5	4	2035.2	4	64.1	13	144.6	-15	8.4	7.7	14.9	19	2.11
rmel (Geo. A.) (2)	677.4	3	2075.6	9	12.8	2	49.8	22	1.9	1.9	15.9	18	1.13
	2659.1	1	7861.6	3	9.3	-43	-10.6	NM	0.3	0.6	0.3	NM	0.03
berial Holly (9)	191.8	-1	524.7	-1	3.8	10	13.3	21	2.0	1.8	15.2	7	2.10
ernational Multifoods (10)	541.3	3	1636.5	2	9.0	18	23.7	40	1.7	1.5	11.5	15	1.93
erstate Bakeries (7)	263.2	2	852.9	0	2.0	NM	-6.7	NM	0.8	NM	-2.2	NM	-1.29
llogg	1506.3	11	4341.3	14	172.4	6	487.8	24	11.4	12.0	30.2	21	4.94
Cormick (1)	341.8	6	998.0	8	20.8	16	50.9	16	6.1	5.6	20.3	22	1.85
chael Foods	111.3	-1	336.1	-3	5.2	17	16.1	16	4.7	4.0	12.3	12	1.17
(6)	434.2	4	1337.8	-2	19.3	79	58.0	NM	4.4	2.6	8.4	49	0.37
neer Hi-Bred International (4)	209.4	77	1076.8	17	-8.6	NM	141.7	36	NM	NM	14.7	18	3.44
aker Oats (6)	1355.8	2	4226.7	6	42.4	28	211.9	9	3.1	2.5	26.7	20	3.17
lston Purina (3)	1832.1	2	5419.0	4	87.5	7	256.6	-4	4.8	4.6	49.4	15	3.34
ra Lee (6)	3106.9	1	9057.0	3	263.4	148	525.3	58	8.5	3.5	29.2	15	2.82
aboard	195.9	55	577.7	51	3.6	-56	12.8	-47	1.8	6.4	8.1	11	12.44
ithfield Foods (8)	241.3	2	811.3	15	3.2	55	24.6	158	1.3	0.9	29.6	10	2.05
ucker (J.M.) (8)	119.7	8	338.8	8	8.9	6	23.6	6	7.5	7.6	16.4	30	1.10
rn Apple Valley (7)	237.6	-2	608.9	9	5.8	50	15.3	NM	2.5	1.6	49.1	8	4.97
R Foods (6)	123.7	-7	369.1	-3	2.5	51	6.1	-55	2.0	3.8	7.0	20	0.77
rigley (Wm.) Jr.	291.4	5	875.3	2	35.5	15	105.6	9	12.2	11.2	28.6	20	3.20

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Chrysler announce
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Gold Key Plus

Leasing offers you low monthly payments because you only pay for the car as long as you lease it.

But at the end of the lease you don't own anything.

Chrysler's Gold Key Plus works like a lease with low monthly payments on cars, trucks or sport utilities. But unlike a lease, you own the vehicle.

Gold Key Plus lets you pay for only the amount of time you want the car or truck. Two, three or four years. And because you only pay for the time you drive the vehicle, you pay les But because you own the vehicle, Gold Key Plus gives you a choice at the end of your payments. Return the vehicle to the dealer and walk away. Pay it off or finance the remaining guaranteed fixed value at no increase to your monthly payments. Keep it...or sell it to anyor you want and pocket any profit.

Conventional Finance 60 Months	Gold Key Plus 35 Months
$409 PER MO†	$299 PER MO*

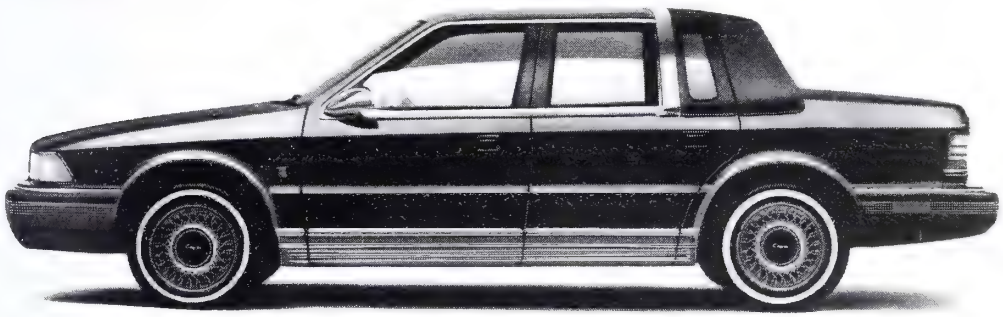
It's all up to you because you're the owner. There's no confusion. You know all the costs going in. You're in control. And that's the big PLUS in Gold Key Plus. See your Dodg Jeep & Eagle and Chrysler-Plymouth dealers to see how much you can save.

*For qualified buyers through Chrysler Credit on new 1992 models. Based on MSRP including destination fee, minus dealer participation of 5% program discount and "Gold Key Plus" Cash Allowance with 9.9% A.P.R. Title, insurance and taxes extra. 35 equal monthly payments. To keep vehicle after term, pay fixed value. Pay for excess wear & tear, 10c/mile over 45,000 allowable miles and $275 disposition fee if you choose to return vehicle. Comparable Gold Key lease payments available in states where "Plus" is unavailable. Must take delivery by December 31, 1991. See participating dealer for details. †Based on MSRP of Jeep Cherokee Laredo equipped as shown. 11% A.P.R. based on national survey of automotive loan rates with $2,200 down. Title & taxes extra.

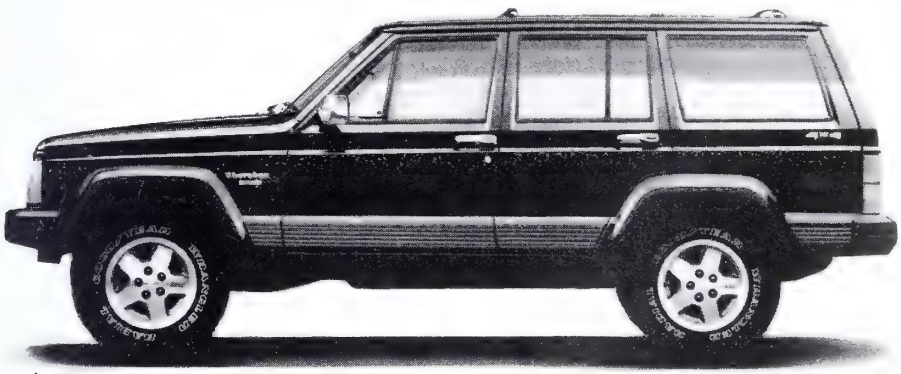
	Vehicle Price	"Plus" Cash Allowance	Down Payment	Fixed Value	Amour Financ
Dynasty w/26C Pkg	$16,715	$1,950	$1,700	$6,352	$12,22
Le Baron Landau w/28L Pkg	$17,641	$1,850	$1,800	$6,704	$13,11
Cherokee w/26K Pkg	$21,999	$1,950	$2,200	$10,340	$16,74

e purchase plan
ly payments.

$249mo.* DODGE DYNASTY/3.3 L V-6 ENGINE/AUTOMATIC TRANSMISSION/AIR-CONDITIONING/POWER DOOR LOCKS/AM/FM CASSETTE STEREO



$269mo.* CHRYSLER LEBARON LANDAU/3.0 L V-6 ENGINE/AUTOMATIC TRANSMISSION/AIR-CONDITIONING/POWER WINDOWS AND LOCKS/AM/FM CASSETTE STEREO



$299mo.* JEEP CHEROKEE LAREDO 4×4/4.0 L 6-CYLINDER ENGINE/AUTOMATIC TRANSMISSION/AIR-CONDITIONING/POWER WINDOWS AND LOCKS

DVANTAGE : CHRYSLER

CHRYSLER Plymouth | Dodge | Jeep Eagle

CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	MO. EARN. F SH.
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
(c) **FOOD RETAILING**													
GROUP COMPOSITE	**32270.2**	**1**	**96520.7**	**2**	**416.8**	**47**	**980.9**	**510**	**1.3**	**0.9**	**26.5**	**21**	**1**
Albertson's (11)	2191.8	6	6465.3	7	58.7	11	191.2	16	2.7	2.6	21.9	20	1
American Stores (11)	5255.4	-6	16375.2	-5	116.4	210	238.4	101	2.2	0.7	18.1	10	3
Bruno's (6)	616.0	5	1934.0	7	12.8	-17	45.6	-2	2.1	2.6	16.4	17	0
Casey's General Stores (8)	166.2*	16	450.1	17	3.6	47	7.1	42	2.1	1.7	11.5	18	0
Circle K (8)	760.0**	-14	2397.3	-10	0.5	NM	-269.3	NM	NM	NM	NM	NM	-6
Dairy Mart Convenience Stores (11)	154.8*	1	433.5	3	2.4	27	2.2	-9	1.5	1.2	10.1	11	0
Delchamps (6)	233.8	-7	698.9	-4	0.4	-81	10.1	-8	0.2	0.9	12.3	12	1
Food Lion	1502.3	14	4415.8	16	50.9	25	144.4	22	3.4	3.1	25.5	30	0
Foodarama Supermarkets (2)	184.3	10	519.6	4	0.4	-38	0.5	-72	0.2	0.4	-0.8	NM	-0
Giant Food (10)	780.4	2	2623.0	1	19.1	-26	88.0	-5	2.4	3.4	18.8	12	1
Great Atlantic & Pacific Tea (10)	2652.7	2	9016.4	5	14.5	-60	82.3	-32	0.5	1.4	9.1	10	3
Hannaford Brothers	523.9**	19	1502.1	20	12.6	9	32.6	-3	2.4	2.6	14.9	21	2
Kroger	6228.4	4	16221.9	6	16.6	NM	59.6	285	0.3	0.0	NM	12	1
National Convenience Stores (6)	226.8	-22	725.4	-11	-3.1	NM	-15.0	NM	NM	0.4	-26.0	NM	-0
Penn Traffic (11)	709.4**	-2	2085.7	-6	-2.0	NM	-6.6	NM	NM	NM	NM	NM	-2
Ruddick (3)	374.4	5	1114.7	4	7.3	23	21.1	15	1.9	1.7	13.8	13	1
Safeway	3537.2	2	10457.4	2	53.0	155	115.3	94	1.5	0.6	64.2	13	1
Seaway Food Town (4)	149.6	10	435.0	6	1.1	-9	1.2	-52	0.8	0.9	3.6	24	0
Smith's Food & Drug Centers	544.0	7	1624.0	8	12.2	42	33.5	32	2.2	1.7	14.9	22	1
Stop & Shop (11)	1124.2	2	3970.8	5	2.5	NM	26.1	NM	0.2	NM	20.0	NA	0
Supermarkets General Holding (11)	1514.6	-4	4517.5	-6	-7.2	NM	-11.3	NM	NM	NM	NM	NA	
Village Super Market (5)	189.7	3	532.7	1	0.8	-21	1.7	-51	0.4	0.6	3.8	15	0
Weis Markets	316.6	2	961.1	2	17.8	-17	58.1	-6	5.6	6.9	13.2	15	1
Winn-Dixie Stores (6)	2333.9	2	7043.7	2	26.7	9	124.1	13	1.1	1.1	20.1	17	2
11 **FUEL**													
INDUSTRY COMPOSITE	**96267.5**	**-12**	**307321.5**	**2**	**2982.0**	**-38**	**12539.5**	**-7**	**3.1**	**4.4**	**12.2**	**17**	**2.**
(a) **COAL**													
GROUP COMPOSITE	**1107.4**	**5**	**3188.7**	**4**	**30.8**	**-15**	**74.0**	**-18**	**2.8**	**3.4**	**8.3**	**18**	**1.**
Ashland Coal	112.1	14	332.2	10	9.4	44	27.1	28	8.4	6.6	19.0	16	1
Nacco Industries	351.0	8	979.5	0	3.9	-56	10.4	-67	1.1	2.8	2.9	48	1
Pittston	495.4**	2	1449.6	6	21.9	29	42.6	63	4.4	3.5	12.2	10	1
Westmoreland Coal	149.0	2	427.4	3	-4.4	NM	-6.0	NM	NM	2.6	-3.3	NM	-0
(b) **OIL & GAS**													
GROUP COMPOSITE	**92361.1**	**-12**	**295669.1**	**1**	**2705.3**	**-40**	**11856.6**	**-7**	**2.9**	**4.3**	**12.1**	**17**	**2.**
Amerada Hess	1326.3**	-24	4794.5	3	-7.5	NM	135.9	-45	NM	16.0	11.9	12	4
Amoco	6186.0	-22	21091.0	-6	290.0	-45	1020.0	-26	4.7	6.7	10.9	17	3
Apache	111.9**	72	240.5	25	1.1	-89	19.8	-31	1.0	14.6	7.9	27	0
Ashland Oil (3)	2596.0	1	7018.5	1	62.5	6	155.8	-3	2.4	2.3	10.5	10	2
Atlantic Richfield	4377.0*	-9	13330.0	2	-156.0	NM	441.0	-61	NM	9.6	14.2	19	6
Burlington Resources	409.4	1	1278.1	-3	49.9	37	148.9	-3	12.2	9.0	6.9	28	1
Chevron	10000.0***	-6	30600.0	6	313.0	-22	1254.0	-18	3.1	3.8	12.4	14	5
Coastal	2205.7	0	6953.4	4	3.4	-90	83.9	-36	0.2	1.5	8.7	18	1
Diamond Shamrock	667.9	-8	1938.7	3	17.4	-67	39.4	-43	2.6	7.3	11.0	11	1
Exxon	24426.0**	-16	85471.9	4	1115.0	4	4480.0	30	4.6	3.7	18.7	13	4
Fina	837.8	-21	2477.3	-11	7.7	-71	20.2	-81	0.9	2.5	3.5	28	2
Holly (5)	116.3	1	352.1	6	2.6	-79	8.9	-53	2.3	11.0	41.7	20	1
Kerr-McGee	832.2	-13	2402.0	-6	26.8	-38	66.8	-33	3.2	4.5	5.4	27	1
Louisiana Land & Exploration	201.3**	-1	604.7	-5	2.2	-73	15.0	-46	1.1	4.0	9.3	27	1
Mapco	698.5*	0	2050.1	5	35.9	45	94.8	-8	5.1	3.5	34.1	13	4
Maxus Energy	188.2	9	585.5	24	-8.2	NM	-7.8	NM	NM	2.4	NM	NM	-0
Mitchell Energy & Development (11)	197.9	22	642.3	22	7.9	55	34.7	51	4.0	3.1	8.5	17	1
Mobil	13504.0**	-9	41633.0	1	365.0	-4	1520.0	19	2.7	2.6	13.2	13	5
Murphy Oil	469.6**	-19	1417.7	-4	43.6	16	-37.1	NM	9.3	6.5	-1.7	NM	-0
Occidental Petroleum	2330.0	-14	7487.0	-7	148.0	50	376.0	41	6.4	3.6	-37.9	NM	-5
Oryx Energy	325.0	-34	1103.0	-15	-8.0	NM	59.0	-31	NM	9.8	29.4	16	2
Pennzoil	688.5**	-3	2022.2	0	-82.9	NM	-44.7	NM	NM	3.8	-1.2	NM	-0
Phillips Petroleum	2970.0	-10	9405.0	1	56.0	-69	275.0	-10	1.9	5.4	18.4	13	1
Quaker State	212.7	-6	612.8	-7	5.8	39	12.0	-20	2.7	1.9	5.5	24	0
Texaco	9356.0**	-15	28567.0	-1	286.0	-25	970.0	-9	3.1	3.5	14.9	13	4
Tosco	493.5	-11	1495.0	-2	2.1	-97	41.9	-62	0.4	12.3	15.1	13	1
Union Texas Petroleum Holdings	275.0**	-15	879.0	-2	51.1	468	252.1	350	18.6	2.8	51.4	7	2
Unocal	2422.0**	-15	7333.0	-6	9.0	-93	89.0	-75	0.4	4.2	5.0	49	0
Unocal Exploration	192.0**	-21	663.5	7	12.9	0	98.3	-11	6.7	5.3	19.4	18	0
USX-Marathon Group	3488.0	-5	10404.0	4	23.0	-72	158.0	-46	0.7	2.2	10.5	21	1
Valero Energy	256.4	-14	816.4	2	30.0	-6	75.9	24	11.7	10.7	14.8	11	2
(c) **PETROLEUM SERVICES**													
GROUP COMPOSITE	**2798.9**	**5**	**8463.7**	**15**	**245.9**	**24**	**608.9**	**13**	**8.8**	**7.4**	**15.7**	**23**	**1.**
Baroid	172.2	11	512.9	21	5.7	3	16.1	35	3.3	3.5	9.1	20	0
Dresser Industries (2)	1156.6	-2	3417.0	10	43.9	-2	82.8	-21	3.8	3.8	9.0	17	1
Schlumberger	1470.1	11	4533.8	18	196.3	33	509.9	21	13.4	11.1	19.6	25	2

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTH EARNINGS PER SHARE
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
12 HEALTH CARE													
INDUSTRY COMPOSITE	**39670.0**	**12**	**117210.8**	**12**	**4112.9**	**20**	**12323.8**	**29**	**10.4**	**9.6**	**27.3**	**21**	**2.6**
(a) **DRUG DISTRIBUTION**													
GROUP COMPOSITE	**9535.9**	**15**	**28107.7**	**12**	**121.9**	**11**	**482.4**	**8**	**1.3**	**1.3**	**15.2**	**17**	**1.5**
Bergen Brunswig (4)	1252.3**	11	3656.0	9	12.9	-11	47.1	-1	1.0	1.3	13.7	14	1.5
Bindley Western Industries	588.5	13	1679.9	17	2.8	26	8.5	21	0.5	0.4	16.6	11	1.5
Cardinal Distribution (9)	365.7	28	1052.2	37	5.3	42	16.0	42	1.4	1.3	10.3	25	1.1
Drug Emporium (10)	184.9	26	546.1	28	-2.7	NM	-0.6	NM	NM	1.5	1.4	NM	0.0
Durr-Fillauer Medical	240.0	22	695.3	15	4.5	2	14.0	16	1.9	2.2	14.1	15	1.4
Eckerd (Jack) (11)	840.6	7	2700.2	3	-13.4	NM	5.0	NM	NM	NM	NM	NA	N.
Fay's (11)	207.4	28	575.2	21	1.2	-62	8.1	-1	0.6	2.0	13.5	16	0.7
Longs Drug Stores (11)	576.9	3	1827.0	7	14.2	-9	45.5	-8	2.5	2.8	14.4	13	2.8
McKesson (9)	2551.5**	26	6967.0	13	24.4	-2	78.7	14	1.0	1.2	17.1	16	2.4
Perry Drug Stores (2)	160.1	5	475.7	-1	1.6	27	4.2	-27	1.0	0.8	0.9	NM	0.0
Rite Aid (10)	900.7	9	2740.6	9	25.1	17	93.0	14	2.8	2.6	12.9	15	1.3
Walgreen (4)	1667.3	12	5192.5	11	46.1	14	162.8	12	2.8	2.7	18.6	20	1.5
(b) **DRUGS & RESEARCH**													
GROUP COMPOSITE	**15699.6**	**9**	**46420.3**	**12**	**2784.0**	**21**	**8191.2**	**23**	**17.7**	**16.0**	**32.4**	**22**	**3.1**
Allergan	228.0	3	665.6	4	-121.6	NM	-87.4	NM	NM	11.4	-11.5	NM	-0.9
American Home Products	1875.8	8	5259.6	2	384.9	21	1002.7	11	20.5	18.2	46.5	17	4.2
Amgen	178.6	127	472.0	128	49.4	245	37.9	19	27.7	18.2	20.3	NM	0.0
Bristol-Myers Squibb	2757.1	5	8222.2	9	563.4	14	1545.5	17	20.4	18.9	36.2	22	3.7
Carter-Wallace (9)	171.7	9	508.4	12	7.8	-50	31.8	-20	4.5	9.9	11.6	35	2.9
Genentech	123.0**	17	359.1	9	13.5	NM	44.2	NM	11.0	NM	6.5	59	0.5
ICN Pharmaceuticals (1)	118.0	89	259.1	32	2.0	NM	7.8	NM	1.7	NM	-8.2	NM	-0.1
Lilly (Eli)	1341.3	5	4153.1	11	297.5	16	1003.6	15	22.2	20.0	25.9	17	4.3
Marion Merrell Dow	716.0	15	2078.0	13	155.0	16	456.0	22	21.6	21.4	40.4	14	2.0
Merck	2117.4	11	6288.8	13	552.4	19	1591.9	19	26.1	24.3	46.6	25	5.2
Pfizer	1773.0	8	5099.8	10	274.7	13	721.2	12	15.5	14.8	18.1	26	2.5
Rhone-Poulenc Rorer	861.8	3	2714.3	50	79.9	233	201.9	NM	9.3	2.9	44.5	18	2.6
Schering-Plough	887.8	12	2750.0	9	156.0	11	496.6	14	17.6	17.6	33.8	21	2.8
Syntex (5)	447.5	13	1362.3	21	85.0	13	298.6	26	19.0	18.9	43.7	22	1.8
Upjohn	836.0	12	2506.1	12	140.2	25	401.0	17	16.8	15.0	31.5	15	2.8
Warner-Lambert	1266.5	7	3721.9	8	143.8	15	437.9	15	11.4	10.5	35.4	19	4.0
(c) **HEALTH CARE SERVICES**													
GROUP COMPOSITE	**5396.2**	**17**	**15741.9**	**16**	**276.7**	**26**	**835.2**	**30**	**5.1**	**4.8**	**17.8**	**14**	**1.3**
Beverly Enterprises	581.0	8	1690.7	8	9.6	69	22.2	130	1.6	1.0	4.9	24	0.3
Continental Medical Systems (6)	121.9	85	316.6	71	5.3	102	14.1	72	4.3	4.0	9.0	33	0.9
FHP International (6)	364.2	24	1054.9	25	5.9	-30	29.2	22	1.6	2.9	22.3	9	1.2
Foundation Health (6)	259.7**	14	743.1	6	9.5	183	24.3	144	3.7	1.5	39.0	10	2.4
Hillhaven (7)	324.3	10	958.6	11	0.2	-26	1.7	46	0.1	0.1	0.9	NM	0.0
Humana (4)	1563.0	22	4535.0	21	92.0	8	280.0	13	5.9	6.6	18.6	12	2.2
Lifetime	217.1	17	635.4	24	4.8	2	13.9	14	2.2	2.5	11.9	13	1.9
Manor Care (7)	225.3	16	641.6	16	10.5	24	24.9	19	4.7	4.3	13.3	21	0.9
National Health Laboratories	153.6	22	449.6	20	25.6	27	77.1	25	16.7	16.0	33.8	22	0.9
National Medical Enterprises (7)	984.5	10	2949.9	6	71.6	20	221.9	16	7.3	6.7	16.4	9	1.7
U.S. Healthcare	435.3**	30	1249.5	27	39.3	106	107.8	141	9.0	5.7	47.4	16	1.9
Universal Health Services	166.4	2	516.9	3	2.5	75	18.0	72	1.5	0.9	10.7	9	1.3
(d) **MEDICAL PRODUCTS**													
GROUP COMPOSITE	**9038.4**	**10**	**26940.9**	**11**	**930.3**	**18**	**2815.0**	**56**	**10.3**	**9.6**	**23.0**	**23**	**2.7**
Abbott Laboratories	1653.7	10	4990.3	12	251.6	14	774.0	13	15.2	14.7	35.7	23	2.4
Bard (C.R.)	220.2	10	650.4	10	14.1	34	42.1	41	6.4	5.3	15.4	27	0.9
Bausch & Lomb	396.9	11	1133.2	11	44.5	16	106.8	16	11.2	10.7	18.1	20	2.4
Baxter International	2212.0	10	6531.0	10	156.0	16	407.0	NM	7.1	6.7	14.6	18	2.0
Imcera Group (6)	381.3	2	1243.3	8	27.5	64	88.7	48	7.2	4.5	10.0	27	4.4
Johnson & Johnson	3119.0	10	9299.0	10	363.0	16	1187.0	30	11.6	11.1	28.0	22	4.2
Medtronic (8)	264.7	13	798.3	15	36.1	19	110.5	21	13.7	13.0	19.7	32	2.3
Mine Safety Appliances	123.1	7	366.5	6	4.6	30	15.2	-27	3.7	5.7	8.7	13	3.6
Owens & Minor	333.6	8	968.1	7	3.5	39	8.5	42	1.0	0.8	12.5	24	0.8
U.S. Surgical	207.5	54	600.8	67	25.2	103	62.6	99	12.1	9.2	30.0	67	1.3
Westmark International	126.3	6	360.1	-1	4.4	41	12.5	-2	3.5	2.6	5.6	32	1.6
13 HOUSING & REAL ESTATE													
INDUSTRY COMPOSITE	**7964.9**	**-4**	**22541.6**	**-5**	**237.1**	**-38**	**361.0**	**-66**	**3.0**	**4.6**	**5.5**	**43**	**0.5**
(a) **BUILDING MATERIALS**													
GROUP COMPOSITE	**6240.9**	**-3**	**17600.8**	**-5**	**202.5**	**-41**	**308.4**	**-67**	**3.2**	**5.4**	**7.2**	**37**	**0.6**
Ameron (1)	125.8	4	348.3	7	3.3	-27	4.1	-48	2.7	3.8	5.5	17	2.0
Barnes Group	136.7	2	407.9	-2	5.0	29	11.9	-3	3.7	2.9	12.7	13	2.6
Hughes Supply (11)	120.0	-19	354.8	-15	-0.5	NM	-3.8	NM	NM	1.0	-3.3	NM	-0.6
Lafarge	543.4	-9	1188.3	-11	43.8	-21	-31.0	NM	8.1	9.2	-2.9	NM	-0.4

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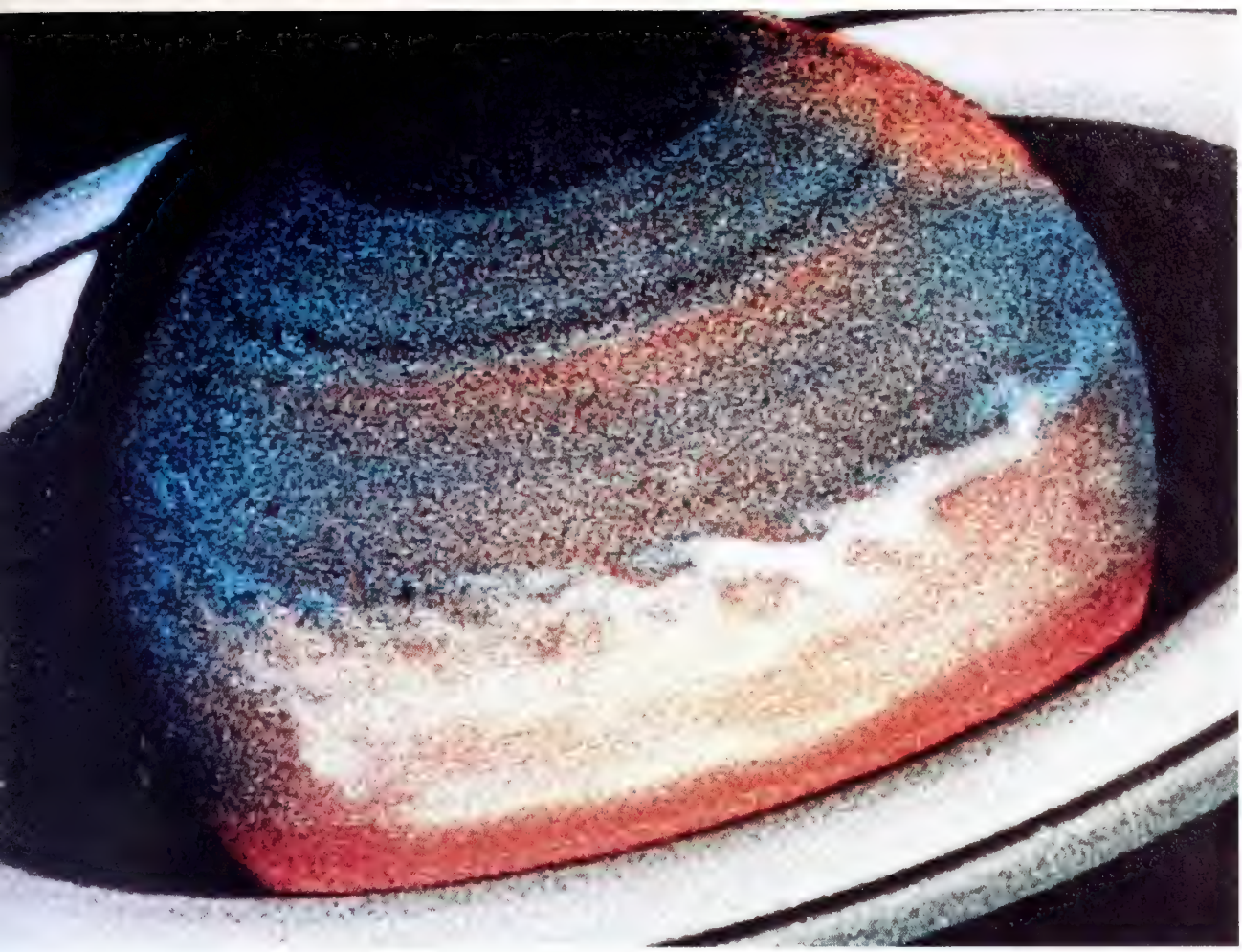

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTH EARNINGS PER SHA
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
Manville	532.7	-3	1519.8	-3	-30.6	NM	7.6	-92	NM	4.0	-2.6	NM	-0.0
Owens-Corning Fiberglas	759.0	-8	2124.0	-9	27.0	-23	19.0	-82	3.6	4.3	NM	NM	-0.3
Ply Gem Industries	160.1	4	430.6	1	3.7	7	2.8	-46	2.3	2.2	0.7	NM	0.0
PPG Industries	1393.5	-5	4248.1	-6	68.9	-36	169.9	-55	4.9	7.3	10.7	20	2.5
RPM (7)	130.2	-3	365.5	-1	10.2	-9	21.3	1	7.9	8.3	15.3	19	0.9
Sherwin-Williams	736.8	15	1987.8	14	50.4	8	105.6	4	6.8	7.3	15.7	16	1.4
Southdown	141.3**	-7	382.6	-12	-9.7	NM	-19.4	NM	NM	NM	-6.9	NM	-1.3
Standex International (6)	112.8	-6	343.2	-3	4.6	-13	13.2	-16	4.1	4.5	14.0	11	2.0
Tecumseh Products	273.2	2	918.4	-12	12.6	NM	31.7	158	4.6	NM	5.0	16	6.1
Texas Industries (7)	163.1**	-7	472.3	-4	6.3	-78	1.7	-92	3.8	16.3	0.0	NM	0.0
USG	445.0	-9	1295.0	-11	-32.0	NM	-98.0	NM	NM	NM	NM	NM	-2.6
Valspar (2)	177.8	10	461.6	9	9.2	-8	18.0	-10	5.2	6.3	17.6	20	2.2
Vulcan Materials	289.2	-6	752.7	-10	30.2	-28	53.9	-46	10.5	13.7	10.8	20	1.9
(b) **CONSTRUCTION & REAL ESTATE GROUP COMPOSITE**	**1724.1**	**-6**	**4940.9**	**-7**	**34.6**	**-8**	**52.6**	**-58**	**2.0**	**2.0**	**-0.9**	**NM**	**-0.0**
Centex (9)	551.5**	-8	1608.2	-7	9.2	-37	19.2	-59	1.7	2.4	5.6	21	1.8
Forest City Enterprises (11)	117.4**	14	337.0	18	-2.0	NM	-0.5	NM	NM	2.7	-2.4	NM	-0.3
Kaufman & Broad Home (1)	277.1	-15	903.2	-9	6.9	-17	13.3	-64	2.5	2.6	6.8	25	0.5
PHM	309.2**	2	860.0	3	13.5	161	21.7	-16	4.4	1.7	7.9	15	1.0
Ryland Group	343.1	3	870.5	-11	6.9	20	7.8	-57	2.0	1.7	4.2	30	0.7
U.S. Home	125.8**	-23	361.9	-27	0.1	-84	-8.9	NM	0.1	0.5	NM	NM	-1.9
14 **LEISURE TIME INDUSTRIES**													
INDUSTRY COMPOSITE	**16563.9**	**6**	**46733.8**	**5**	**1313.8**	**119**	**2652.6**	**20**	**7.9**	**3.8**	**13.8**	**17**	**1.7**
(a) **EATING PLACES GROUP COMPOSITE**	**2732.7**	**2**	**7963.5**	**4**	**304.5**	**8**	**778.4**	**11**	**11.1**	**10.5**	**20.8**	**16**	**1.9**
Bob Evans Farms (8)	131.2	7	382.4	8	8.8	15	26.0	29	6.7	6.2	14.0	17	1.1
Brinker International (6)	124.1	22	349.6	24	8.4	39	23.3	51	6.8	6.0	13.7	33	1.4
Karcher (Carl) Enterprises (11)	128.8	3	411.4	3	3.7	-26	7.0	390	2.9	4.0	10.9	17	0.4
McDonald's	1736.6	-2	4965.2	1	258.7	7	659.2	7	14.9	13.7	20.7	15	2.3
Morrison (7)	241.7**	6	739.3	7	5.7	15	20.0	54	2.4	2.2	14.8	14	1.6
Shoney's (2)	243.9**	7	758.5	7	12.1	26	28.7	26	5.0	4.2	NM	21	0.8
Sizzler International (8)	126.5	12	357.0	27	7.0	31	14.2	6	5.6	4.8	7.2	15	0.8
(b) **ENTERTAINMENT GROUP COMPOSITE**	**1330.7**	**1**	**3720.9**	**6**	**130.0**	**2**	**108.1**	**-47**	**9.8**	**9.6**	**5.7**	**28**	**0.8**
Blockbuster Entertainment	229.7	39	616.6	36	27.4	43	64.7	36	11.9	11.6	22.4	23	0.5
Commtron (4)	137.0**	15	375.2	-1	1.4	-27	4.5	-26	1.0	1.7	11.1	8	0.7
Paramount Communications (2)	963.9	-7	2729.1	1	101.2	-5	38.9	-74	10.5	10.3	3.9	31	1.2
(c) **HOTEL & MOTEL GROUP COMPOSITE**	**3178.4**	**8**	**9445.8**	**8**	**127.1**	**33**	**285.8**	**-11**	**4.0**	**3.3**	**9.3**	**30**	**0.8**
Aztar	129.8	-1	364.6	-6	6.7	183	4.2	NM	5.2	1.8	0.3	NM	0.0
Caesars World (5)	244.6	9	672.7	4	18.5	151	35.6	84	7.5	3.3	16.9	15	2.0
Circus Circus Enterprises (11)	210.0	19	583.4	36	28.7	76	69.7	45	13.7	9.3	35.1	20	1.7
Hilton Hotels	275.1**	6	829.2	4	18.8	-14	54.7	-36	6.8	8.4	8.8	25	1.7
Marriott	1835.0	11	5602.0	10	18.0	-33	55.0	-46	1.0	1.6	0.2	NM	-0.0
Mirage Resorts	192.7	-10	614.1	-2	13.3	154	35.8	-5	6.9	2.4	9.9	22	1.2
Promus	291.2	5	779.9	2	23.2	48	30.8	-26	8.0	5.7	3.5	71	0.3
(d) **OTHER LEISURE GROUP COMPOSITE**	**9322.2**	**7**	**25603.6**	**4**	**752.2**	**682**	**1480.3**	**50**	**8.1**	**1.1**	**14.9**	**15**	**2.3**
American Greetings (10)	335.8	10	1046.3	10	8.3	33	52.0	17	2.5	2.0	10.8	14	2.7
Brunswick	525.1	-11	1564.8	-20	7.5	-86	-10.0	NM	1.4	9.2	-3.4	NM	-0.3
Carnival Cruise Lines (1)	534.3	11	1208.2	10	123.1	15	197.0	5	23.0	22.2	20.0	17	1.5
Eastman Kodak	4926.0	3	14337.0	4	-118.0	NM	417.0	11	NM	NM	10.8	20	2.2
Fisher-Price (6)	188.0	21	452.6	6	8.2	NM	13.3	NM	4.4	NM	-7.4	NA	N
Fleetwood Enterprises (8)	398.5	2	1060.7	-9	12.0	11	25.1	-32	3.0	2.8	7.0	23	1.4
Harley-Davidson	240.6	19	702.2	5	8.9	24	29.7	-16	3.7	3.6	15.0	23	1.8
Harman International Industries (6)	135.8	3	424.0	0	-1.3	NM	-22.3	NM	NM	0.7	-27.3	NM	-2.5
Hasbro	704.8	57	1379.9	34	47.5	44	36.8	-40	6.7	7.4	7.8	30	1.1
Huffy	159.4	35	517.3	31	2.7	-30	16.0	-6	1.7	3.3	14.4	15	1.3
Mattel	523.5	7	1108.1	6	56.6	18	88.8	16	10.8	9.8	31.0	15	2.0
Polaroid	474.6	2	1437.2	4	582.0	NM	625.2	551	NM	6.8	83.6	2	12.0
Tyco Toys	175.8	4	365.3	6	14.7	58	11.7	-11	8.4	5.5	2.2	NM	0.0
15 **MANUFACTURING**													
INDUSTRY COMPOSITE	**25500.2**	**-3**	**76389.8**	**-1**	**890.2**	**-23**	**2546.3**	**-29**	**3.5**	**4.4**	**9.5**	**23**	**1.1**
(a) **GENERAL MANUFACTURING GROUP COMPOSITE**	**10131.9**	**2**	**29942.0**	**3**	**659.4**	**-2**	**1819.0**	**-8**	**6.5**	**6.7**	**15.5**	**21**	**2.4**
Alliant Techsystems (9)	238.5	12	794.7	2	10.3	NM	25.2	245	4.3	NM	21.0	5	4.3
Avery Dennison	609.2	-5	1895.7	-1	12.6	174	45.3	-12	2.1	0.7	NA	NM	0.0
Blount (10)	154.2	-11	434.7	-13	-1.1	NM	-6.1	NM	NM	NM	-2.1	NM	-0.2
Carlisle	163.3	4	463.7	-1	-19.0	NM	-13.3	NM	NM	4.1	-3.7	NM	-1.0

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY		
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9/30	PRICE-EARNINGS RATIO 10/25	12 MONTH EARNINGS PER SHARE
Corning†	963.5	9	2432.9	12	104.5	1	225.6	4	10.8	11.7	15.5	24	3.1
Crane	341.7	-8	987.1	-11	13.0	-24	35.2	-25	3.8	4.6	16.0	14	1.6
Duracell International (6)	398.7	10	1000.9	12	40.1	616	14.5	NM	10.1	1.5	10.6	35	0.7
Federal Signal	116.6	7	346.6	5	8.3	13	22.6	10	7.1	6.8	19.7	20	1.3
Harsco	447.8	8	1356.8	8	25.1	39	49.3	-7	5.6	4.4	15.4	10	2.6
Hillenbrand Industries (1)	283.3	9	867.7	6	21.4	33	63.3	12	7.5	6.2	17.6	26	2.2
Illinois Tool Works	654.2	1	1935.5	4	45.0	-3	133.5	-2	6.9	7.1	15.6	20	3.2
Jostens (6)	141.8	0	638.9	7	2.9	2	49.7	5	2.0	2.0	21.7	21	1.5
Keystone International	126.9	11	362.3	10	9.4	-23	29.9	-11	7.4	10.6	17.3	21	1.1
Mark IV Industries (10)	284.4	29	834.2	30	7.7	15	19.9	6	2.7	3.0	9.7	10	1.7
Minnesota Mining & Mfg.	3378.0	1	10116.0	4	296.0	-12	895.0	-12	8.8	10.1	19.5	17	5.4
Newell	305.1	9	808.7	1	33.3	21	78.9	7	10.9	9.8	19.1	24	1.7
Parker Hannifin (6)	573.7	-7	1782.1	-6	16.5	31	32.6	-63	2.9	3.9	5.5	27	1.0
Rubbermaid†	429.4	10	1257.6	9	46.4	15	124.1	12	10.8	10.4	17.8	30	1.9
Tredegar Industries	121.8	-10	358.1	-17	2.4	NM	3.5	NM	2.0	NM	-9.9	NM	-1.2
Trinova	400.0	-15	1267.7	-13	-15.2	NM	-9.5	NM	NM	1.8	-0.9	NM	-0.1
(b) **MACHINE & HAND TOOLS**													
GROUP COMPOSITE	**2632.0**	**-9**	**7884.2**	**-6**	**13.4**	**-88**	**93.4**	**-72**	**0.5**	**3.7**	**4.4**	**34**	**0.7**
Black & Decker	1097.3	-14	3291.4	-6	9.7	-47	21.1	-53	0.9	1.4	3.2	37	0.4
Clark Equipment	283.1	-19	895.9	-17	-33.0	NM	-60.4	NM	NM	3.8	-11.3	NM	-3.2
Danaher	208.1**	-10	613.7	0	4.3	-64	12.4	-63	2.1	5.1	4.6	38	0.5
Kennametal (6)	149.9	-1	463.5	-1	3.7	-47	11.6	-56	2.5	4.5	7.3	18	1.6
Snap-on Tools	215.5**	-5	663.8	-6	19.1	-24	56.3	-33	8.9	11.1	10.8	18	1.7
SPX	172.0	-3	506.2	-7	-18.6	NM	-17.5	NM	NM	2.5	-9.0	NM	-1.3
Stanley Works	506.1	3	1449.7	-2	28.2	2	69.9	-14	5.6	5.6	13.7	17	2.3
(c) **SPECIAL MACHINERY**													
GROUP COMPOSITE	**9682.6**	**-8**	**29888.2**	**-4**	**193.2**	**-51**	**616.2**	**-52**	**2.0**	**3.7**	**6.1**	**26**	**1.5**
Applied Materials (2)	167.3	16	478.0	12	8.4	-12	19.9	-36	5.0	6.6	7.3	19	1.3
Briggs & Stratton (6)	158.0	-1	705.0	-7	-2.6	NM	25.8	-16	NM	NM	13.0	16	2.5
BWIP Holding	110.5	12	330.5	16	8.0	80	25.3	16	7.3	4.5	18.3	24	0.9
Caterpillar	2358.0	-16	7724.0	-11	-37.0	NM	-86.0	NM	NM	1.9	-1.7	NM	-0.7
Deere (2)	1789.8**	-13	5152.8	-11	31.3	-73	61.3	-82	1.7	5.6	4.6	30	1.7
Dover	534.1	-3	1644.6	0	32.9	-19	97.3	-18	6.2	7.3	16.4	17	2.2
FMC	967.5	3	2891.5	5	41.7	18	142.9	12	4.3	3.8	79.0	11	4.6
General Signal	393.4	-5	1201.8	-6	16.0	2	45.4	133	4.1	3.8	2.7	77	0.6
Goulds Pumps	148.8	3	428.1	4	9.4	1	25.4	4	6.3	6.5	15.0	14	1.5
Harnischfeger Industries (2)	412.9	-4	1210.0	-6	14.5	-16	46.0	-7	3.5	4.0	11.2	9	2.1
Ingersoll-Rand	865.5	-8	2652.3	-4	34.7	-14	95.9	-31	4.0	4.3	9.2	18	2.7
Interlake	178.3	-9	536.0	-11	-1.2	NM	-9.1	NM	NM	NM	NM	NM	-1.2
Pentair	300.6	0	873.5	-1	11.2	18	27.4	24	3.7	3.1	14.4	13	3.0
Stewart & Stevenson Services (11)	160.1	0	482.6	-2	8.5	13	22.8	-1	5.3	4.7	15.7	24	2.0
Timken	386.7	-8	1259.3	-1	-4.0	NM	0.5	NM	NM	2.0	0.3	NM	0.1
Tyco Laboratories (6)	751.0	1	2318.2	31	21.4	-39	75.3	-11	2.9	4.7	11.5	16	2.2
(d) **TEXTILES**													
GROUP COMPOSITE	**3053.7**	**2**	**8675.6**	**-1**	**24.1**	**NM**	**17.8**	**61**	**0.8**	**NM**	**0.6**	**36**	**0.6**
Albany International	136.2**	0	412.6	3	2.7	115	7.2	-4	2.0	0.9	3.2	63	0.2
Delta Woodside Industries (6)	170.4	32	498.5	25	10.0	304	26.8	353	5.9	1.9	18.2	15	1.6
Dixie Yarns	122.1	-11	378.4	-12	-2.5	NM	-2.6	NM	NM	1.4	-0.6	NM	-0.1
DWG (8)	302.8	2	920.4	-1	-3.1	NM	-18.0	NM	NM	NM	-20.7	NM	-0.7
Fieldcrest Cannon	302.1	-4	869.5	-4	2.6	NM	0.7	NM	0.9	NM	-10.6	NM	-2.4
Guilford Mills (6)	143.5	20	427.7	5	4.9	64	13.2	-2	3.4	2.5	8.7	15	1.7
Interface	137.2	-9	433.6	-5	1.7	-71	5.4	-70	1.2	3.7	6.5	15	0.6
Shaw Industries (6)	436.8	4	1208.2	-3	13.2	-5	23.5	-54	3.0	3.3	15.7	29	1.1
Springs Industries	476.1	5	1389.2	-1	8.1	NM	15.2	NM	1.7	NM	4.7	23	1.4
Unifi (6)	260.5	12	495.1	13	-2.5	NM	18.6	-34	NM	5.5	19.6	27	1.5
Wickes (11)	565.9	-6	1642.4	-9	-10.9	NM	-72.2	NM	NM	NM	-9.5	NA	N
16 **METALS & MINING**													
INDUSTRY COMPOSITE	**14704.2**	**-7**	**43796.3**	**-8**	**272.1**	**-72**	**583.8**	**-80**	**1.9**	**6.2**	**-0.5**	**NM**	**0.1**
(a) **ALUMINUM**													
GROUP COMPOSITE	**5960.6**	**-5**	**17873.2**	**-4**	**149.2**	**-60**	**553.7**	**-52**	**2.5**	**5.9**	**5.2**	**20**	**1.9**
Aluminum Co. of America	2469.9	-8	7449.2	-7	75.9	-39	254.1	-42	3.1	4.7	2.2	46	1.3
Amax	977.7	5	2874.9	1	3.2	-95	40.2	-76	0.3	6.3	4.5	18	1.1
Kaiser Aluminum	509.7	-4	1529.5	-3	23.1	-59	81.3	-50	4.5	10.5	36.3	5	2.5
Maxxam	577.8	-4	1718.8	-4	5.5	-80	47.7	-58	1.0	4.7	18.1	4	8.4
Reynolds Metals	1425.5	-6	4300.8	-3	41.5	59	130.4	-54	2.9	6.6	5.0	22	2.4
(b) **STEEL**													
GROUP COMPOSITE	**6106.1**	**-9**	**17912.9**	**-12**	**-62.0**	**NM**	**-555.6**	**NM**	**NM**	**3.0**	**-18.1**	**NM**	**-2.5**
Allegheny Ludlum	241.4	-11	772.8	-9	4.7	-72	28.1	-55	2.0	6.3	9.4	24	1.0
Armco	387.6	-7	1186.8	-10	-26.9	NM	-95.0	NM	NM	NM	-14.5	NM	-1.2
Bethlehem Steel	1121.6	-7	3292.2	-11	-60.6	NM	-128.9	NM	NM	0.8	-62.2	NM	-8.8
Birmingham Steel (6)	111.1	-3	305.2	-10	5.5	4	-1.0	NM	4.9	4.6	0.2	NM	0.0
Carpenter Technology (6)	126.5	1	423.2	-3	2.2	-66	16.2	-51	1.7	5.2	8.1	16	3.0

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE EARNINGS RATIO	12 MONTHS' EARNINGS PER SHARE
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
mercial Metals (4)	301.2**	4	860.6	2	4.1	-43	8.4	-56	1.4	2.5	6.0	18	1.12
ps Industries	268.7	-10	799.9	-12	0.7	-61	-8.2	NM	0.2	0.6	-8.2	NM	-0.72
d Steel Industries	860.1	-10	2557.6	-14	-18.8	NM	-83.8	NM	NM	NM	-13.3	NM	-5.49
ns	162.6	-8	496.7	-5	9.8	-21	31.5	-10	6.0	7.0	17.8	9	4.64
r	372.4	-4	1094.6	-2	15.5	-26	42.9	-22	4.2	5.4	9.3	27	2.94
nex (2)	152.3	-10	437.4	-9	3.5	-55	8.0	-57	2.3	4.6	10.6	17	1.32
U.S. Steel Group	1281.0	-12	3558.0	-20	5.0	-94	-342.0	NM	0.4	5.6	-15.9	NM	-5.76
ton Steel	253.1	-14	756.1	-17	-19.8	NM	-68.1	NM	NM	1.1	-30.4	NM	-3.92
eling Pittsburgh	244.7	-15	722.3	-13	0.4	-98	3.9	-95	0.2	7.8	NM	NA	NA
hington Industries (7)	221.9	2	649.6	-7	12.7	7	32.4	-26	5.7	5.4	12.5	38	0.77
R METALS													
UP COMPOSITE	**2637.5**	**-8**	**8010.3**	**-7**	**184.9**	**-55**	**585.7**	**-44**	**7.0**	**14.3**	**11.5**	**21**	**1.48**
co	493.4	-17	1417.5	-15	10.3	-83	33.7	-77	2.1	10.0	2.5	29	0.92
us Minerals	441.9	-10	1273.4	-8	30.4	-32	71.6	-30	6.9	9.0	5.9	14	1.67
port-McMoRan Copper & Gold	153.2	13	346.1	7	24.8	-25	56.2	-22	16.2	24.5	39.6	42	0.85
ly & Harman	112.9	-2	345.1	-5	2.1	-21	-11.1	NM	1.8	2.3	-12.1	NM	-0.63
ration Resources	195.7**	2	947.5	9	-8.5	NM	20.9	NM	NM	NM	1.3	NM	0.03
na Copper	193.8	-3	527.1	-9	10.8	-60	26.0	-57	5.6	13.5	6.9	5	1.26
mont Gold	136.8	-15	427.8	-13	29.0	-21	92.5	-21	21.2	22.8	17.4	34	1.12
mont Mining	148.4	-13	466.9	-10	12.2	-88	71.6	-55	8.2	57.2	53.4	32	1.27
s Dodge	617.6	-8	1821.0	-9	64.7	-49	197.7	-44	10.5	18.7	17.1	9	8.68
sion Castparts (9)	143.8	11	437.9	12	9.1	14	26.6	10	6.3	6.2	12.6	17	1.99
NBANK FINANCIAL													
STRY COMPOSITE	**50659.1**	**4**	**152066.8**	**5**	**3033.4**	**19**	**9766.5**	**28**	**5.8**	**5.0**	**12.9**	**12**	**3.46**
NCIAL SERVICES													
UP COMPOSITE	**21931.8**	**7**	**65662.4**	**7**	**1374.6**	**5**	**4970.5**	**49**	**5.9**	**6.0**	**17.3**	**12**	**3.06**
hany	452.3	31	1154.7	8	20.9	45	35.3	-32	4.6	4.2	7.8	12	8.12
rican Express	6483.0**	7	19138.0	6	31.0	-91	551.0	174	0.5	5.7	9.8	14	1.40
Stearns (6)	597.1**	6	1828.5	2	47.1	161	155.1	80	7.9	3.2	18.2	9	1.69
(H&R) (8)	171.1	27	1039.2	17	-5.4	NM	142.4	16	NM	NM	25.5	26	1.31
rford	136.5	19	401.7	20	10.0	15	28.7	17	7.3	7.6	23.7	26	1.02
rds (A. G.) (10)	219.1**	27	618.9	26	23.8	55	64.6	53	10.8	8.9	18.0	15	2.19
ax	270.6	1	799.0	1	18.6	-3	41.0	-27	6.9	7.2	12.7	23	0.60
ral Home Loan Mortgage	1061.0	6	3143.0	7	149.0	21	409.0	16	14.0	12.3	21.1	13	7.84
ral National Mortgage Assn.	3364.7**	5	10184.2	8	350.7	17	1088.4	26	10.4	9.3	28.0	12	5.19
Financial Management	298.7**	26	830.2	28	25.8	44	61.8	34	8.6	7.6	10.4	13	3.08
h & McLennan	679.0**	0	2113.3	3	74.0	-1	251.3	1	10.9	10.9	29.7	17	4.17
ill Lynch	3037.5**	7	9240.5	11	160.2	248	525.4	225	5.3	1.6	14.9	10	4.80
gan Stanley Group	1738.4**	12	4997.7	14	121.8	69	342.7	62	7.0	4.6	19.2	11	5.02
eWebber Group	810.9**	13	2337.7	3	38.4	301	103.7	196	4.7	1.3	-1.9	NM	-0.67
erica	1589.9**	6	4755.1	6	123.5	31	346.7	26	7.8	6.3	14.8	9	4.00
non	NM	NM	NM	NM	85.0	8	536.0	69	NM	NM	14.4	6	4.03
rab (Charles)	202.3**	23	572.1	22	13.2	82	33.4	111	6.5	4.4	20.3	27	1.32
ent Loan Marketing Assn.	819.7	-11	2508.6	-7	87.2	12	254.0	14	10.6	8.5	35.8	17	3.39
RANCE													
UP COMPOSITE	**25126.4**	**3**	**75204.8**	**5**	**1565.7**	**19**	**4560.1**	**10**	**6.2**	**5.4**	**12.0**	**10**	**4.95**
a Life & Casualty	4550.4	-6	13952.6	-3	115.3	30	412.2	-13	2.5	1.8	7.7	8	5.04
rican Family	830.7	22	2385.4	24	38.6	30	107.0	28	4.6	4.4	16.7	15	1.72
rican General	1102.0	-4	3309.0	-2	115.8	-23	360.8	-21	10.5	13.2	11.0	10	4.04
rican International Group	3919.3	5	11605.7	7	376.8	12	1153.2	9	9.6	9.1	14.4	11	7.20
rican National Insurance	310.6	11	893.7	11	42.6	87	98.3	26	13.7	8.2	8.0	8	4.87
naut Group	117.4	-32	388.1	-16	29.6	36	64.5	2	25.2	12.6	17.4	8	3.41
b	1170.6**	6	3389.1	7	151.4	4	412.7	12	12.9	13.2	17.3	10	6.55
a	4517.0	-3	13974.0	5	123.0	NM	341.0	62	2.7	0.2	8.2	8	6.26
eco	347.9	71	963.1	86	26.8	195	73.1	177	7.7	4.5	51.7	8	7.36
ford Steam Boiler Inspection	157.9	12	467.0	13	18.6	-3	58.8	-1	11.8	13.7	20.3	14	3.74
per	784.4	7	2320.0	6	56.1	50	160.7	NM	7.1	5.1	11.9	8	4.30
ln National	2237.8	12	6598.7	10	74.6	96	192.4	45	3.3	1.9	10.4	9	5.61
ressive	387.4**	11	1113.9	8	11.2	-38	46.6	-43	2.9	5.2	13.6	21	2.39
ident Life & Accident	695.1**	5	2072.9	3	24.4	-52	94.9	-27	3.5	7.6	10.4	6	3.11
co	841.4**	4	2525.2	6	68.3	28	174.8	6	8.1	6.6	12.8	9	4.27
aul	1125.8	12	3232.0	9	107.7	0	295.6	-1	9.6	10.7	17.4	7	8.98
mark	482.5	5	1438.3	8	62.7	3	183.1	1	13.0	13.3	22.2	12	4.36
in†	307.5	0	933.2	3	33.3	-20	92.2	5	10.8	13.4	7.3	14	2.54
M	609.2	10	1796.2	14	52.8	14	155.4	11	8.7	8.4	15.4	11	6.03
fe	351.6	15	1011.3	11	18.6	5	52.2	6	5.3	5.8	7.5	9	4.62
hington National	141.2	-14	426.9	-21	4.4	NM	-5.1	NM	3.1	NM	-7.5	NM	-2.11
th National Insurance	138.8	6	408.6	7	12.9	79	35.7	46	9.3	5.5	0.8	87	0.18
NGS & LOAN													
UP COMPOSITE	**3600.9**	**-9**	**11199.6**	**-7**	**93.1**	**NM**	**235.9**	**63**	**2.6**	**NM**	**0.6**	**NM**	**0.16**
anson (H.F.)	1096.4**	-10	3519.0	-2	65.1	5	181.8	-5	5.9	5.1	7.6	11	1.55
ed	399.5	-15	1375.5	-14	-50.2	NM	-58.5	NM	NM	NM	-16.6	NM	-7.40
del Holding	124.5**	-7	400.3	2	-32.7	NM	-21.2	NM	NM	3.6	-7.3	NM	-5.11

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	MONTHS EARNINGS
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
Coast Savings Financial	203.5**	-27	695.5	-15	6.8	NM	31.5	NM	3.4	NM	10.8	4	1
Dime Savings Bank of N.Y.	253.6	-8	749.6	-11	-4.5	NM	-40.1	NM	NM	NM	-11.2	NM	-2
Glenfed (6)	508.4	-17	1422.6	-24	17.1	-5	-118.9	NM	3.4	2.9	-26.8	NM	-6
Golden West Financial	566.4	6	1685.3	7	60.7	41	175.0	26	10.7	8.0	16.3	11	3
Metropolitan Financial	121.2	13	366.2	15	12.2	99	34.0	118	10.1	5.7	15.9	4	5
Standard Federal Bank	216.1**	-6	652.9	-4	15.6	57	44.4	50	7.2	4.3	10.9	8	1
TCF Financial	111.2**	-4	332.8	-6	3.0	-28	7.9	NM	2.7	3.5	7.6	11	1
18 OFFICE EQUIPMENT & COMPUTERS													
INDUSTRY COMPOSITE	**44794.5**	**0**	**135120.9**	**2**	**1098.3**	**-47**	**1810.4**	**-72**	**2.5**	**4.6**	**6.8**	**29**	**1.**
(a) **BUSINESS MACHINES & SERVICES**													
GROUP COMPOSITE	**3465.3**	**10**	**10102.6**	**10**	**177.1**	**69**	**482.8**	**17**	**5.1**	**3.3**	**14.8**	**18**	**1.**
American Business Products	111.4	17	331.3	14	4.1	31	11.6	16	3.7	3.3	13.9	15	2
Bell & Howell	152.7	4	452.7	3	-1.4	NM	-10.4	NM	NM	NM	-39.8	NA	-8
CompuCom Systems	146.2	65	348.8	49	1.8	69	3.4	61	1.2	1.2	17.2	18	0
CUC International (11)	133.9	21	386.5	23	7.3	88	19.6	109	5.5	3.5	387.3	38	0
Deluxe	362.4	3	1078.7	5	45.3	2	130.2	10	12.5	12.5	26.0	18	2
Diebold	126.7	10	361.0	4	9.3	313	21.1	18	7.3	2.0	8.0	23	2
HON Industries	161.3	-1	438.2	-11	10.5	-2	21.4	-30	6.5	6.6	24.9	16	1
Intelligent Electronics (2)	460.5	28	1313.6	24	8.1	9	28.6	43	1.8	2.1	14.4	9	2
Merisel	389.1	27	1118.6	34	3.0	NM	5.0	NM	0.8	NM	4.8	27	0
Miller (Herman) (7)	184.6	-21	597.2	-11	2.5	-77	-5.2	NM	1.4	4.6	1.9	71	0
Pitney Bowes	813.9	2	2426.6	4	69.9	570	205.2	57	8.6	1.3	17.1	16	3
Standard Register	163.8	-6	509.8	-3	6.8	21	19.7	-18	4.1	3.2	5.5	21	0
Tech Data (11)	144.4	41	392.9	29	2.5	103	6.7	NM	1.8	1.2	15.5	15	1
Wallace Computer Services (5)	114.3	2	346.7	2	7.3	-32	25.8	-15	6.4	9.5	11.3	12	1
(b) **COMPUTERS & PERIPHERALS**													
GROUP COMPOSITE	**36621.7**	**-2**	**111272.4**	**-1**	**563.2**	**-66**	**39.5**	**-99**	**1.5**	**4.4**	**4.8**	**31**	**1.**
AM International (5)	218.2	-8	643.2	-6	7.7	-10	7.1	NM	3.5	3.6	1.0	20	0
Amdahl	419.3	-14	1312.6	-13	5.5	-88	23.3	-81	1.3	9.5	6.1	18	0
Apple Computer (3)	1507.1	11	4633.3	14	81.2	-18	159.3	-54	5.4	7.3	18.6	20	2
AST Research (6)	197.1	45	588.2	38	16.5	44	53.5	48	8.3	8.4	22.7	10	2
Commodore International (6)	204.1	2	666.9	9	5.3	-24	19.2	419	2.6	3.5	19.2	8	1
Compaq Computer	709.4	-18	2398.0	-8	-70.3	NM	64.3	-80	NM	14.3	10.6	14	2
Conner Peripherals	394.7	4	1182.0	29	17.4	-57	79.2	-4	4.4	10.7	18.3	7	2
Control Data	344.9	-21	1122.0	-11	-8.2	NM	6.6	-75	NM	2.0	-4.0	NM	-0
Cray Research	205.6	10	545.9	-1	28.1	2	53.4	-33	13.7	14.8	13.1	14	3
Dell Computer (11)	200.0	64	542.2	54	12.4	94	31.1	142	6.2	5.3	15.8	16	1
Digital Equipment (6)	3293.1	6	10758.3	11	28.6	9	-726.2	NM	0.9	0.8	-8.1	NM	-4
Dynatech (9)	121.2	-4	351.7	-2	4.0	-14	8.1	-39	3.3	3.7	8.4	13	1
Everex Systems (5)	118.7	2	320.3	-5	-31.3	NM	-48.3	NM	NM	6.4	-52.1	NM	-2
Hewlett-Packard (2)	3524.0	9	10662.0	10	192.0	8	630.0	17	5.4	5.5	11.7	15	3
International Business Machines	14433.0	-6	42710.0	-7	172.0	-85	818.0	-77	1.2	7.3	8.6	17	5
Maxtor (9)	250.0	4	708.1	34	-9.3	NM	-69.8	NM	NM	0.7	-61.4	NM	-2
Quantum (9)	244.8	27	786.9	62	7.7	-58	40.2	-17	3.2	9.6	21.8	7	1
Seagate Technology (6)	620.1	-2	1973.6	0	-47.8	NM	-22.1	NM	NM	2.2	0.2	NM	0
Silicon Graphics (6)	151.7	31	449.9	30	9.4	-2	22.4	-24	6.2	8.3	8.6	31	1
Storage Technology	298.2	12	876.4	9	21.5	78	56.1	51	7.2	4.6	12.6	15	2
Stratus Computer	112.5	8	320.6	12	13.9	43	32.1	37	12.3	9.4	16.4	19	2
Sun Microsystems (6)	754.9	12	2545.7	27	26.8	3	151.9	36	3.5	3.9	15.0	13	1
Tandem Computers (3)	509.1	1	1478.4	3	2.9	-91	28.2	-69	0.6	6.3	2.8	37	0
Tandy (6)	1052.0**	-3	3047.6	-3	41.8	-19	97.4	-40	4.0	4.8	11.0	11	2
Unisys	1972.3	-18	6234.0	-13	-75.8	NM	-1473.8	NM	NM	NM	NM	NM	-10
Wang Laboratories (6)	460.7	-18	1451.8	-19	-9.8	NM	-364.7	NM	NM	0.4	NM	NM	-2
Xerox	4305.0**	-2	12963.0	0	121.0	-2	363.0	1	2.8	2.8	12.2	11	5
(c) **COMPUTER SOFTWARE & SERVICE**													
GROUP COMPOSITE	**4707.6**	**18**	**13745.9**	**17**	**358.0**	**13**	**1288.1**	**14**	**7.6**	**7.9**	**19.7**	**28**	**1.**
Automatic Data Processing (6)	429.1**	4	1361.5	4	45.8	10	178.5	7	10.7	10.1	22.0	22	1
Borland International (9)	113.9	13	321.9	38	-103.0	NM	-82.6	NM	NM	NM	-52.7	NM	-2
Computer Associates Intl. (9)	318.5	3	982.7	6	28.9	3	96.8	-2	9.1	9.0	15.7	10	0
Computer Sciences (9)	467.4	11	1400.1	12	14.0	3	49.4	-4	3.0	3.3	12.2	17	4
Electronic Data Systems	1697.0	13	4941.6	14	145.5	13	407.1	12	8.6	8.5	21.7	23	2
Intergraph	294.0	15	882.8	19	14.5	20	54.6	25	4.9	4.7	10.3	12	1
Lotus Development	218.8	37	579.7	15	21.5	151	37.3	-32	9.8	5.4	1.7	NM	0
Microsoft (6)	580.5	57	1594.0	57	144.0	64	406.2	67	24.8	23.7	38.4	33	2
Novell (2)	168.0	28	452.8	27	43.0	65	111.9	81	25.6	19.9	26.7	43	0
Oracle Systems (7)	244.7	14	801.3	4	2.4	NM	20.0	-47	1.0	NM	5.4	NM	0
Safeguard Scientifics	175.6	52	427.4	37	1.4	-82	8.9	-29	0.8	6.8	13.5	5	2

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CORPORATE SCOREBOARD

MPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE EARNINGS	12 MONTHS' EARNINGS
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	RATIO 10-25	PER SHARE
PER & FOREST PRODUCTS													
USTRY COMPOSITE	**19591.1**	**-4**	**57697.7**	**-5**	**494.8**	**-42**	**1562.7**	**-49**	**2.5**	**4.2**	**5.5**	**26**	**1.64**
EST PRODUCTS													
UP COMPOSITE	**4308.6**	**-2**	**12704.7**	**-5**	**76.0**	**-53**	**190.1**	**-70**	**1.8**	**3.7**	**3.3**	**39**	**0.79**
e Cascade	1016.7	-4	2987.3	-6	-14.3	NM	-63.7	NM	NM	1.3	-6.1	NM	-1.91
siana-Pacific	449.5	0	1296.9	-9	26.5	25	47.1	-50	5.9	4.7	3.6	36	1.20
e & Talbot	124.0	-12	386.8	-11	-0.3	NM	3.7	-84	NM	2.5	0.2	NM	0.05
verhaeuser	2213.4	-2	6572.7	-5	50.4	-44	172.4	-49	2.3	4.0	6.0	24	1.16
amette Industries	505.0	4	1461.0	1	13.6	-57	30.6	-74	2.7	6.5	4.3	35	1.68
ER													
UP COMPOSITE	**15282.5**	**-5**	**44992.9**	**-5**	**418.8**	**-39**	**1372.6**	**-43**	**2.7**	**4.3**	**6.2**	**24**	**1.95**
vater	312.0	-10	962.6	-6	7.1	-70	44.0	-36	2.3	6.8	6.1	13	1.62
mpion International	1228.3	-5	3571.6	-7	10.5	-83	29.8	-85	0.9	4.8	0.8	78	0.32
sapeake	219.5	2	636.7	-1	4.8	61	9.7	-35	2.2	1.4	3.7	43	0.55
solidated Papers	217.2	-8	667.8	-7	19.8	-42	70.0	-38	9.1	14.3	10.5	16	2.30
rgia-Pacific	2973.0	-13	8732.0	-9	-27.0	NM	-1.0	NM	NM	2.8	2.1	76	0.73
felter (P.H.)	142.1	-6	426.4	-9	17.4	-14	55.4	-11	12.2	13.3	18.6	14	3.56
rnational Paper	3300.0	0	9500.0	-2	109.0	-40	345.0	-37	3.3	5.5	6.4	22	3.33
es River Corp. of Virginia	1118.8	-13	3457.4	-17	8.5	NM	70.5	336	0.8	NM	NA	16	1.32
berly-Clark	1694.6	8	5050.0	6	126.1	2	369.6	15	7.4	7.8	20.6	16	6.01
d	1210.8	-5	3484.5	-4	25.3	-45	57.4	-61	2.1	3.6	1.2	92	0.33
atch	322.9	3	933.1	-3	18.2	-26	39.6	-58	5.6	7.9	4.9	24	1.53
t Paper	1210.2	-9	3653.6	-7	28.0	-57	87.8	-56	2.3	4.9	1.7	77	0.49
n Camp	768.6	9	2221.4	5	33.7	-35	104.8	-41	4.4	7.3	8.2	22	2.28
tvaco (2)	564.6	-5	1695.8	-4	37.4	-21	89.8	-36	6.6	8.0	8.3	18	2.12
BLISHING & BROADCASTING													
USTRY COMPOSITE	**13371.9**	**1**	**39924.3**	**1**	**353.0**	**-53**	**1387.4**	**-35**	**2.6**	**5.6**	**4.3**	**67**	**0.62**
ADCASTING													
UP COMPOSITE	**2692.5**	**1**	**8458.8**	**-1**	**-75.0**	**NM**	**264.8**	**-62**	**NM**	**7.3**	**4.0**	**99**	**0.69**
erican TV & Communications	303.6	9	909.4	11	42.4	32	116.4	33	14.0	11.5	24.9	37	1.36
ital Cities/ABC	1209.3	0	3822.4	0	54.0	-25	240.3	-25	4.5	5.9	11.2	17	23.65
	625.6	-5	2097.6	-10	-169.1	NM	-108.1	NM	NM	6.6	-55.8	NM	-13.36
imedia	127.4	6	381.2	8	10.4	-19	33.8	7	8.2	10.8	NM	16	1.37
om	426.6	9	1248.2	7	-12.7	NM	-17.7	NM	NM	8.8	-15.5	NM	-0.98
LISHING													
UP COMPOSITE	**10679.4**	**1**	**31465.5**	**1**	**428.0**	**-23**	**1122.6**	**-21**	**4.0**	**5.2**	**4.3**	**59**	**0.60**
iated Publications	121.9	-7	381.3	-4	-1.0	NM	1.1	-94	NM	3.1	3.5	72	0.11
merce Clearing House	362.4	148	1078.7	96	-1.5	NM	30.1	-26	NM	NM	13.0	20	0.87
Jones	409.5	0	1269.0	-1	16.0	-33	68.7	-18	3.9	5.8	6.4	26	0.91
& Bradstreet	1099.5	-5	3387.6	-3	142.4	2	355.2	-5	13.0	12.1	24.1	17	2.75
nett	819.7	-1	2480.8	-2	59.5	-25	204.6	-21	7.3	9.6	22.2	20	2.08
court Brace Jovanovich	347.6**	-5	726.6	-2	60.1	6	-45.1	NM	17.3	15.6	NM	NM	-1.38
ghton Mifflin	211.2	18	388.4	13	33.8	26	30.7	17	16.0	15.0	11.1	19	1.56
ht-Ridder	539.2	-5	1648.8	-4	28.3	-23	85.7	-20	5.2	6.4	13.4	19	2.53
raw-Hill	489.5	-3	1374.9	0	55.1	-18	102.7	-15	11.2	13.4	16.1	17	3.15
lia General	142.2	-6	437.9	-4	-78.8	NM	-71.3	NM	NM	4.8	-24.7	NM	-2.62
edith (6)	170.0	-5	547.5	0	2.9	-68	15.2	NM	1.7	5.0	4.9	27	1.00
York Times	393.4	-7	1250.6	-5	1.9	-79	12.4	-76	0.5	2.2	2.3	61	0.32
ders Digest Association (6)	577.5	10	1752.8	13	54.8	9	158.0	18	9.5	9.6	28.9	21	1.78
ops (E.W.)	317.3	-1	945.8	-1	14.9	-15	39.7	47	4.7	5.4	9.4	25	0.81
Warner	2940.0	1	8631.0	5	-62.0	NM	-144.0	NM	NM	NM	-12.8	NM	-12.07
es Mirror	897.2**	0	2641.8	-1	41.0	-2	95.0	-30	4.6	4.7	7.4	27	1.09
une	501.1	-15	1508.3	-17	34.5	-10	109.3	-15	6.9	6.5	-21.4	NM	-1.55
hington Post	340.0	-3	1013.7	-5	26.1	-30	74.8	-44	7.7	10.8	12.6	19	9.85
RVICE INDUSTRIES													
USTRY COMPOSITE	**14892.2**	**7**	**43424.3**	**9**	**636.3**	**-3**	**1710.2**	**-7**	**4.3**	**4.7**	**14.0**	**22**	**1.37**
STRUCTION & ENGINEERING													
UP COMPOSITE	**3913.6**	**0**	**11514.4**	**2**	**100.0**	**18**	**241.0**	**-2**	**2.6**	**2.2**	**13.0**	**19**	**1.70**
gee Enterprises (10)	158.8	3	439.0	-2	3.9	-24	10.0	-25	2.5	3.4	12.9	11	1.09
er Mfg.	123.5	-18	336.2	-22	-2.1	NM	-6.7	NM	NM	2.1	-10.2	NM	-0.97
S (6)	115.9	2	354.4	-2	1.1	-56	5.0	-58	1.0	2.3	6.6	18	0.54
G	745.9	9	2048.4	10	21.6	18	57.5	9	2.9	2.7	21.1	14	2.81
r (2)	1613.0	-9	5072.7	-7	47.5	48	103.2	5	2.9	1.8	14.8	25	1.77
er Wheeler	468.3	3	1437.6	26	9.3	19	30.8	13	2.0	1.7	8.5	20	1.18
nite Construction	173.9	1	414.3	4	8.0	12	13.3	9	4.6	4.1	14.1	13	1.72
rison Knudsen	514.4**	25	1411.7	18	10.8	27	27.9	19	2.1	2.1	10.7	13	3.13
USTRIAL DISTRIBUTION													
UP COMPOSITE	**4391.1**	**3**	**12974.1**	**5**	**126.8**	**-18**	**391.2**	**-13**	**2.9**	**3.6**	**11.8**	**21**	**1.39**
et (6)	412.9	-6	1279.0	-3	11.0	-38	39.5	-4	2.7	4.0	6.9	17	1.54
rings (6)	202.0	-2	606.9	12	1.0	-3	3.6	-28	0.5	0.5	3.2	34	0.61
uine Parts	897.8	4	2591.9	3	53.0	2	148.0	-2	5.9	6.0	19.1	16	2.67
ty Petroleum (11)	283.7	-9	915.2	5	-4.9	NM	-5.1	NM	NM	NM	-26.3	NM	-1.75

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY		
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	PRICE-EARNINGS RATIO 10-25	12 MONTH EARNINGS PER SHA
Grainger (W.W.)	541.2	8	1557.5	8	31.6	0	93.0	1	5.8	6.3	15.1	20	2.3
Howell	122.7	-3	358.1	16	-0.4	NM	0.6	-84	NM	1.5	5.2	20	0.5
Kaman	189.7**	-7	579.7	-6	4.5	8	12.9	8	2.4	2.4	9.2	8	1.0
Marshall Industries (7)	137.5	-6	424.1	-2	4.0	-19	12.1	-23	2.9	3.4	10.3	13	1.9
Office Depot	331.8	40	959.8	49	6.2	129	7.6	-6	1.9	1.1	5.4	69	0.4
Premier Industrial (7)	155.3	-3	470.2	-1	17.6	-10	52.8	-7	11.3	12.3	24.9	21	1.2
Staples (11)	111.5	73	308.2	66	-0.8	NM	-0.3	NM	NM	0.3	1.5	NM	0.0
TBC	138.9	2	377.0	-2	5.1	6	13.0	4	3.7	3.5	21.2	14	1.2
United Stationers (4)	225.0	7	705.8	-6	2.8	-10	7.3	-20	1.3	1.3	5.5	16	0.6
Univar (10)	367.4	1	1063.4	2	-8.6	NM	-3.9	NM	NM	1.6	0.5	NM	0.0
VWR	118.8	6	330.5	2	3.1	52	5.7	3	2.6	1.8	21.8	14	1.3
Willcox & Gibbs	154.9	7	446.9	6	1.5	-57	4.3	-48	1.0	2.3	1.4	72	0.1
(c) **POLLUTION CONTROL**													
GROUP COMPOSITE	**2534.0**	**20**	**7345.2**	**30**	**251.1**	**1**	**659.8**	**0**	**9.9**	**11.8**	**17.5**	**24**	**1.2**
Air & Water Technologies (2)	157.2	-4	478.5	11	-0.7	NM	-26.6	NM	NM	2.5	-13.7	NM	-1.0
Chemical Waste Management	339.5	22	987.8	30	33.2	-34	88.6	-31	9.8	17.9	13.7	27	0.6
International Technology (9)	122.4	22	338.3	21	11.4	167	18.0	50	9.3	4.2	20.5	11	0.6
Waste Management	1914.9	22	5540.5	33	207.2	9	579.8	13	10.8	12.2	19.7	23	1.5
(d) **PRINTING & ADVERTISING**													
GROUP COMPOSITE	**1711.9**	**11**	**4885.7**	**15**	**87.6**	**3**	**225.9**	**-6**	**5.1**	**5.5**	**14.2**	**18**	**2.3**
Advo-System (3)	186.2	11	536.8	9	6.3	15	14.8	16	3.4	3.3	26.5	18	1.0
Banta	144.0	-7	418.0	-4	8.5	-4	20.7	-9	5.9	5.7	12.5	12	2.1
Donnelley (R.R.) & Sons	980.6	9	2776.5	17	62.9	0	136.4	-13	6.4	7.0	12.7	17	2.6
Interpublic Group	401.0**	27	1154.3	22	9.9	23	54.0	13	2.5	2.6	18.1	20	2.4
(e) **OTHER SERVICES**													
GROUP COMPOSITE	**2341.5**	**9**	**6705.1**	**5**	**70.8**	**-13**	**192.2**	**-22**	**3.0**	**3.8**	**11.4**	**22**	**1.0**
Adia Services	162.9**	-5	477.4	-4	2.6	-47	5.9	-60	1.6	2.9	4.6	31	0.6
American Building Maintenance (2)	188.2	8	546.7	9	3.1	11	7.4	12	1.6	1.6	12.4	13	2.6
CDI	190.4	-20	571.4	-18	-1.1	NM	-5.4	NM	NM	1.0	-3.6	NM	-0.2
Handleman (8)	166.8	14	505.2	-5	5.5	7	12.3	-46	3.3	3.5	10.1	25	0.7
InaCom	191.9	82	427.8	41	-0.9	NM	1.2	-75	NM	1.3	4.0	13	0.7
Kelly Services	378.0	-2	1055.4	-5	11.4	-46	29.5	46	3.0	5.4	13.5	21	1.5
Olsten	216.0**	37	621.9	36	4.2	0	10.2	-17	1.9	2.7	9.5	36	0.6
Pinkerton's	146.1	8	429.7	7	3.1	10	7.3	26	2.1	2.1	10.8	14	1.5
Rollins	124.5	10	364.8	9	8.6	15	26.3	13	6.9	6.6	31.1	18	1.2
Safety-Kleen	160.0	17	472.4	20	13.2	10	37.7	7	8.3	8.8	12.8	28	1.0
Service Corp. International	152.5	18	462.1	10	18.1	40	53.1	10	11.9	10.1	14.3	17	1.4
Volt Information Sciences (2)	121.5	0	343.1	-7	0.9	-69	1.1	-16	0.7	2.4	-1.5	NM	-0.2
Wackenhut	142.7	6	427.4	10	2.1	12	5.5	14	1.5	1.4	19.3	12	1.9
22 **TELECOMMUNICATIONS**													
INDUSTRY COMPOSITE	**42934.8**	**2**	**126949.3**	**2**	**1409.4**	**-61**	**8711.5**	**-22**	**3.3**	**8.5**	**11.6**	**18**	**2.2**
(a) **EQUIPMENT & SERVICES**													
GROUP COMPOSITE	**15705.0**	**3**	**46476.7**	**5**	**-1514.4**	**NM**	**685.3**	**-76**	**NM**	**4.9**	**7.0**	**38**	**0.9**
American Telephone & Telegraph	11043.0	1	32706.0	3	-1799.0	NM	-113.0	NM	NM	7.4	3.8	69	0.5
Communications Satellite	127.0	13	381.5	12	19.3	57	57.2	14	15.2	10.9	-1.6	NM	-0.5
MCI Communications	2148.0	7	6271.0	10	140.0	NM	407.0	137	6.5	NM	19.1	14	1.9
Pacific Telecom	173.5	-7	535.8	14	28.5	44	64.7	-5	16.4	10.6	15.9	12	2.3
United Telecommunications	2213.5	5	6582.4	6	96.8	8	269.4	13	4.4	4.3	14.0	15	1.5
(b) **TELEPHONE COMPANIES**													
GROUP COMPOSITE	**27229.8**	**1**	**80472.6**	**1**	**2923.8**	**3**	**8026.1**	**-4**	**10.7**	**10.6**	**12.8**	**15**	**2.8**
Alltel	438.6	10	1290.3	10	46.7	0	140.4	2	10.7	11.8	18.8	15	2.4
Ameritech	2705.3	1	8075.9	1	379.4	22	966.3	0	14.0	11.7	15.8	13	4.7
Bell Atlantic	3104.0	0	9181.1	0	382.7	7	1091.4	1	12.3	11.6	14.5	13	3.4
BellSouth	3628.5	2	10751.0	1	352.4	-13	1120.0	-12	9.7	11.3	11.4	16	3.0
Centel	295.3	3	881.8	2	28.9	120	86.7	134	9.8	4.6	8.6	28	1.1
Cincinnati Bell	285.2	8	816.2	12	18.8	-20	26.4	-60	6.6	8.9	8.3	26	0.7
GTE	5362.0	1	15953.0	1	462.0	6	1065.0	-15	8.6	8.2	13.7	18	1.7
Nynex	3271.6	-3	9989.0	-2	291.8	-2	852.1	-4	8.9	8.8	9.7	17	4.5
Pacific Telesis Group	2499.0	1	7429.0	2	275.0	-4	857.0	3	11.0	11.5	13.6	15	2.6
Rochester Telephone	182.9	22	505.1	14	15.6	25	56.5	54	8.5	8.3	12.3	13	2.2
Southern New England Telecomms.	416.7**	2	1223.0	1	38.0	84	92.3	-4	9.1	5.1	11.2	14	2.1
Southwestern Bell	2423.8	2	6809.5	2	363.1	12	840.3	1	15.0	13.7	12.9	15	3.6
US West	2616.9	5	7567.9	3	269.3	-11	831.8	-2	10.3	12.2	12.5	12	2.5
23 **TRANSPORTATION**													
INDUSTRY COMPOSITE	**29502.5**	**5**	**84622.9**	**3**	**297.4**	**-56**	**-6.3**	**NM**	**1.0**	**2.4**	**-7.5**	**NM**	**-1.7**
(a) **AIRLINES**													
GROUP COMPOSITE	**13072.4**	**9**	**36450.5**	**4**	**39.8**	**NM**	**-833.8**	**NM**	**0.3**	**NM**	**-60.7**	**NM**	**-14.6**
Alaska Air Group	314.4	6	839.4	6	16.7	-15	11.2	-59	5.3	6.7	-2.0	NM	-0.3
AMR	3518.6	15	9482.7	9	70.3	7	-115.0	NM	2.0	2.1	-8.6	NM	-5.1
Continental Airlines Holdings	1477.4	-2	4172.0	-14	-19.7	NM	-310.1	NM	NM	NM	NM	NM	-61.4
Delta Air Lines (6)	2573.0	16	7396.5	12	13.1	NM	-51.9	NM	0.5	NM	-11.3	NM	-6.2
Southwest Airlines	355.3	12	962.7	9	15.7	-32	18.1	-65	4.4	7.3	2.2	86	0.3
UAL	3234.9	9	8751.8	6	25.0	-76	-79.3	NM	0.8	3.6	-11.2	NM	-9.0
USAir Group	1598.8	-3	4845.3	-1	-81.4	NM	-306.9	NM	NM	NM	-47.3	NM	-12.5

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTHS' EARNINGS PER SHARE
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
RAILROADS													
GROUP COMPOSITE	**8010.6**	**2**	**23304.3**	**0**	**57.3**	**-90**	**495.5**	**-66**	**0.7**	**7.2**	**5.6**	**33**	**1.29**
Burlington Northern	1155.0	0	3367.0	-4	68.0	17	-360.0	NM	5.9	5.0	-39.2	NM	-4.22
Consolidated Rail	839.0	-1	2405.0	-5	78.0	8	169.0	-1	9.3	8.5	8.5	14	5.55
CSX	2205.0	7	6360.0	6	108.0	7	280.0	19	4.9	4.9	10.9	13	4.11
Illinois Central	139.8	7	409.1	-2	17.6	98	46.6	38	12.6	6.8	24.4	12	2.31
Kansas City Southern Industries	157.5**	18	449.8	16	12.3	-11	32.0	0	7.8	10.3	10.6	14	3.94
Norfolk Southern	1170.0	-1	3350.0	-4	150.3	5	384.3	-12	12.8	12.1	10.7	18	3.32
Santa Fe Pacific	601.3	6	1735.4	1	29.1	259	63.6	NM	4.8	1.4	3.4	59	0.18
Union Pacific	1743.0	-2	5228.0	2	-406.0	NM	-120.0	NM	NM	9.1	1.3	NM	0.29
TRANSPORTATION SERVICES													
GROUP COMPOSITE	**4248.9**	**-2**	**12804.8**	**1**	**67.3**	**-35**	**62.0**	**-76**	**1.6**	**2.4**	**3.1**	**41**	**0.68**
Airborne Freight	350.1	16	1007.9	17	8.4	-20	23.4	-16	2.4	3.5	9.7	18	1.34
Federal Express (7)	1825.8	-5	5604.5	1	17.2	-60	-57.4	NM	0.9	2.2	-1.2	NM	-0.37
ITEL (8)	506.6	3	1541.9	4	11.2	-6	35.8	-17	2.2	2.4	11.7	12	2.74
Ryder System	1263.0	-3	3746.1	-2	25.2	-14	44.6	-36	2.0	2.2	3.5	30	0.63
Xerox Industries (9)	303.5	-5	904.4	-3	5.3	-43	15.6	-25	1.7	2.9	7.6	24	1.24
TRUCKING & SHIPPING													
GROUP COMPOSITE	**4170.5**	**4**	**12063.4**	**4**	**133.0**	**162**	**270.1**	**213**	**3.2**	**1.3**	**8.9**	**18**	**1.61**
Alexander & Baldwin	194.9**	1	548.3	-3	25.8	16	64.2	-30	13.2	11.5	12.7	13	1.90
American President	604.9	12	1780.4	9	34.5	NM	53.6	NM	5.7	NM	11.6	13	3.05
Carolina Freight	178.6	4	522.5	5	1.4	-15	2.1	24	0.8	0.9	2.1	49	0.41
Consolidated Freightways	1016.4	-6	3075.9	-1	-15.6	NM	-33.7	NM	NM	1.1	-8.5	NM	-1.37
CSX	272.2**	21	726.6	16	22.1	6	61.6	5	8.1	9.3	12.6	7	3.74
Greyhound Lines	209.0	0	555.3	9	15.4	65	-1.1	NM	7.4	4.5	NA	NA	NA
Hunt (J. B.) Transport Services	196.0	38	535.3	27	9.4	8	21.1	-9	4.8	6.1	14.0	22	1.21
Ryder	146.2	-15	426.5	-15	0.1	NM	1.2	NM	0.1	NM	1.0	48	0.16
Yellow Freight System	744.3	6	2123.5	5	31.5	-9	75.8	3	4.2	4.9	14.9	18	3.12
Roadway Services	608.1	4	1769.0	3	8.4	-62	25.2	-52	1.4	3.8	8.1	22	1.37
UTILITIES & POWER													
INDUSTRY COMPOSITE	**47149.4**	**3**	**133876.1**	**5**	**4726.8**	**-18**	**12220.0**	**-3**	**10.0**	**12.6**	**9.0**	**16**	**1.89**
ELECTRIC, WATER & COGENERATION													
GROUP COMPOSITE	**41732.2**	**3**	**115750.3**	**5**	**4678.6**	**-18**	**11751.0**	**-3**	**11.2**	**14.2**	**9.2**	**15**	**1.93**
Allegheny Power System	565.3	1	1710.1	-2	52.1	12	162.5	3	9.2	8.3	11.8	12	3.65
American Electric Power	1286.0	-4	3774.0	-3	149.3	6	423.1	-1	11.6	10.6	11.8	12	2.67
Atlantic Energy	250.4	14	597.0	8	59.2	42	85.8	17	23.6	19.1	10.8	12	3.24
Delmore Gas & Electric	700.0	14	1850.0	13	123.6	23	223.9	27	17.7	16.3	8.6	15	2.16
Edison	392.3	11	990.1	6	68.8	21	81.9	18	17.5	16.1	10.1	11	1.90
Carolina Power & Light	787.8	2	2060.8	4	152.5	-1	317.8	25	19.4	19.9	13.2	12	4.11
Interior Energy	699.3	4	1915.4	6	110.2	-4	227.3	-10	15.8	17.1	8.8	10	1.74
Central & South West	899.0	4	2264.0	9	181.0	25	338.0	1	20.1	16.7	12.7	13	3.84
Central Maine Power	200.0	13	624.3	10	13.6	38	45.3	30	6.8	5.6	11.3	10	1.84
Corp	146.7	8	434.5	10	17.9	3	37.3	6	12.2	12.8	11.7	12	2.96
Cincinnati Gas & Electric	350.8	2	1122.7	6	50.9	-18	172.4	2	14.5	18.2	13.7	9	3.96
Dayco	181.7	4	495.2	7	39.0	2	67.2	13	21.5	21.8	12.3	13	2.15
DPL Energy	614.0	0	2225.0	5	32.0	NM	-139.0	NM	5.2	NM	-65.2	NM	-9.36
Commonwealth Edison	1952.3	12	4795.2	20	362.2	8	524.5	NM	18.6	19.2	8.6	16	2.50
Commonwealth Energy System	185.8	1	636.7	6	3.9	50	22.2	31	2.1	1.4	8.5	13	2.70
Consolidated Edison Co. of N.Y.	1720.3	7	4530.3	4	303.4	15	474.7	5	17.6	16.3	12.6	10	2.45
Delmarva Power & Light	238.4	5	653.1	3	33.8	-4	71.7	0	14.2	15.4	4.2	35	0.58
Detroit Edison	942.8	6	2641.6	5	163.5	10	432.1	7	17.3	16.7	18.9	9	3.47
Dominion Resources	1063.8**	6	2869.2	6	194.3	12	414.3	0	18.3	17.4	12.0	12	4.32
DQE	227.5	7	744.9	7	26.6	-34	110.4	-14	11.7	18.9	12.4	11	1.95
DTE	332.0	9	910.0	6	45.4	9	113.4	9	13.7	13.7	12.2	12	2.49
Duke Power	1096.4	-1	2876.7	2	207.8	-3	483.6	6	19.0	19.3	13.0	12	2.51
Florida Progress	589.4	0	1574.1	3	75.7	-1	160.2	1	12.8	13.0	11.7	13	3.43
FPL Group	1518.3	2	4068.2	6	197.9	43	364.8	22	13.0	9.3	12.4	15	2.33
General Public Utilities	904.4	11	2499.0	10	101.5	-9	253.7	-2	11.2	13.7	12.2	10	2.47
GPU States Utilities	499.5	2	1290.0	0	67.2	11	102.5	NM	13.5	12.4	2.2	23	0.38
Hawaiian Electric Industries	274.1	13	821.3	12	16.7	-9	46.0	-2	6.1	7.5	7.6	19	1.90
Illinois Power	381.0	-10	1050.6	0	63.9	-21	92.0	29	16.8	19.0	-6.4	NM	-1.19
Kansas Enterprises	177.1	6	490.5	6	33.9	8	83.9	1	19.1	18.9	13.2	12	2.65
Kentucky Utilities	157.3	4	446.4	8	24.9	4	67.5	9	15.9	15.8	14.7	12	2.16
LG&E Energy	187.8	0	544.1	3	36.3	6	80.0	13	19.3	18.2	12.5	12	3.85
Montana Power	208.0**	20	669.9	14	13.9	84	67.2	22	6.7	4.4	12.8	11	2.06
Nevada Power	184.4	9	415.7	11	31.0	-3	34.9	-19	16.8	18.9	3.2	37	0.47
New England Electric System	506.5	6	1520.2	10	47.1	-72	145.3	-39	9.3	34.7	12.0	12	2.63
New York State Electric & Gas	349.6	6	1166.6	3	29.4	32	145.7	7	8.4	6.7	10.6	11	2.40
Niagara Mohawk Power	734.4	8	2533.9	7	40.8	-32	208.3	11	5.6	8.8	3.0	38	0.46
Nisco Industries	323.4	2	1106.2	1	28.3	1	100.6	6	8.7	8.8	13.0	13	1.91
Northeast Utilities	692.7	3	2031.0	4	78.1	1	219.3	6	11.3	11.4	12.1	11	2.04
Northern States Power	589.1	12	1667.7	6	89.3	29	170.1	6	15.2	13.1	12.0	13	2.94
Ohio Edison	618.4	8	1771.1	7	70.4	-1	213.6	-17	11.4	12.5	8.7	14	1.42

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CORPORATE SCOREBOARD

COMPANY	SALES				PROFITS				MARGINS		RETURN ON COMMON EQUITY	PRICE-EARNINGS RATIO	12 MONTH EARNIN PER SHAR
	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 $ MIL	CHANGE FROM 1990 %	9 MONTHS 1991 $ MIL	CHANGE FROM 1990 %	3RD QUARTER 1991 %	3RD QUARTER 1990 %	12 MONTHS ENDING 9-30	10-25	
Oklahoma Gas & Electric	426.6	10	1030.2	8	75.3	3	121.7	2	17.6	19.0	15.9	11	3.4
Orange & Rockland Utilities	143.7	0	438.5	4	16.4	−6	36.6	6	11.4	12.1	12.5	10	3.6
Pacific Gas & Electric	2520.3	−3	7143.1	2	334.6	−15	779.5	1	13.3	15.2	12.1	14	2.1
Pennsylvania Power & Light	630.7	8	1889.4	6	80.9	−2	263.7	2	12.8	14.2	13.5	12	4.0
Philadelphia Electric	1067.7	7	3016.1	8	173.4	NM	442.3	587	16.2	0.6	10.8	12	1.9
Pinnacle West Capital	474.7	0	1169.5	6	85.9	36	121.8	29	18.1	13.3	6.3	12	1.1
Portland General	206.3	10	640.3	4	2.8	−92	46.0	−43	1.4	18.7	8.3	10	1.4
Potomac Electric Power	562.7	10	1213.3	10	132.9	16	182.6	21	23.6	22.5	11.4	13	1.8
PSI Resources	275.0	7	783.4	5	30.5	−7	94.6	−5	11.1	12.7	16.5	9	2.0
Public Service Co. of Colorado	379.7	4	1321.3	2	34.3	0	91.6	−14	9.0	9.4	12.1	11	2.1
Public Service Co. of New Mexico	199.2	−1	633.0	−3	8.9	10	20.6	687	4.5	4.0	1.2	42	0.2
Public Service Enterprise Group	1258.6	6	3825.8	7	179.0	−5	476.5	7	14.2	15.9	12.2	11	2.5
Puget Sound Power & Light	208.9	7	701.9	5	21.8	18	103.2	8	10.5	9.5	13.7	11	2.3
Rochester Gas & Electric	195.6	4	623.9	2	17.3	11	43.1	3	8.8	8.3	9.5	12	1.7
San Diego Gas & Electric	451.7	0	1306.5	0	53.5	−2	160.5	0	11.8	12.1	14.9	12	3.5
Scana	309.8	−2	864.0	−1	51.4	−50	117.7	−29	16.6	32.5	13.6	12	3.2
SCEcorp	2250.8	0	5615.9	3	258.8	−13	619.4	−3	11.5	13.1	13.5	12	3.5
Southern	2363.2	−3	6161.9	1	399.0	84	761.1	26	16.9	8.9	11.4	12	2.4
Southwestern Public Service (4)	202.8	−4	542.0	−5	36.4	4	84.6	4	17.9	16.5	16.2	12	2.6
Teco Energy	324.2	5	867.7	5	50.2	9	116.1	2	15.5	15.0	16.6	15	2.4
Texas Utilities	1449.7	3	3741.6	10	−735.2	NM	−400.0	NM	NM	26.5	−6.3	NM	−1.9
TNP Enterprises	132.9	14	339.7	12	12.0	28	18.7	20	9.0	8.0	10.6	7	2.2
Tucson Electric Power	181.2	11	442.4	7	−365.5	NM	−461.8	NM	NM	NM	NM	NM	−27.4
Union Electric	687.9	5	1680.4	5	166.9	8	307.2	10	24.3	23.6	15.1	11	3.0
United Illuminating	167.6	3	489.1	11	13.8	−40	43.2	3	8.2	14.2	12.9	10	3.6
Wheelabrator Technologies	286.0	−5	838.6	−2	29.4	NM	97.2	261	10.3	NM	18.0	19	1.4
Wisconsin Energy	364.2	7	1137.1	6	51.5	3	145.6	1	14.1	14.6	13.3	13	2.7
WPL Holdings	152.2	5	477.2	5	18.8	0	49.9	0	12.4	13.1	13.4	13	2.2
Zurn Industries (9)	130.0	−26	429.4	−16	6.7	4	21.8	0	5.1	3.7	12.2	14	2.4
(b) **GAS, OIL & TRANSMISSION GROUP COMPOSITE**	**5417.1**	**2**	**18125.8**	**8**	**48.2**	**616**	**469.0**	**10**	**0.9**	**0.1**	**5.8**	**29**	**1.1**
Eastern Enterprises	183.4	1	739.4	4	−3.7	NM	26.2	−47	NM	NM	7.7	15	1.8
Enron	3284.1	5	9926.5	17	30.7	119	177.1	19	0.9	0.4	12.1	18	4.0
Enserch	622.0	3	2039.1	1	−13.3	NM	15.2	−68	NM	NM	4.8	30	0.5
Nicor	171.8	0	1048.6	−2	8.4	−18	71.1	−4	4.9	5.9	15.4	12	3.7
Panhandle Eastern	431.0	−17	1750.5	−18	15.9	NM	54.8	204	3.7	NM	−16.9	NM	−2.2
Sonat	294.8	1	1136.1	8	4.4	−70	62.2	−1	1.5	4.9	9.3	17	2.5
Williams	430.0	23	1485.6	16	5.7	NM	62.5	152	1.3	NM	9.9	14	2.4

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard catgory under which it is listed

A

A&P **10c**
Abbott Laboratories **12d**
Adia Services **21e**
Advanced Micro **9d**
Advo-System **21d**
Aetna Life & Casualty **17b**
Affiliated Pubs **20b**
Ahmanson (H. F.) **17c**
Air & Water Techs **21e**
Air Products & Chemicals **4**
Airborne Freight **23c**
Alaska Air Group **23a**
Albany International **15d**
Alberto-Culver **6d**
Albertson's **10c**
Alcoa **16a**
Alexander & Baldwin **23d**
Alleghany **17a**
Allegheny Ludlum **16b**
Allegheny Power **24a**
Allergan **12b**
Alliant Techsystems **15a**
Allied-Signal **5**
Alltel **22b**
AM International **18b**
Amax **16a**
Amdahl **18b**
Amerada Hess **11b**
American Brands **6e**
American Building **21e**
American Business **18a**
American Cyanamid **4**
American Electric **24a**
American Express **17a**
American Family **17b**
American General **17b**
American Greetings **14d**
American Home **12b**
American Intl. Group **17b**
American Maize **10b**
American National **17b**
American President **23d**
American Stores **10c**
American TV **20a**
Ameritech **22b**
AmeriTrust **3b**
Ameron **13a**
Ames Dept Stores **8**
Ametek **9c**
Amgen **12b**
Amoco **11b**
AMP **9d**
AMR **23a**
Analog Devices **9d**
Anheuser-Busch **6c**
Aponte **11b**
Apogee Enterprises **21a**
Apple Computer **18b**
Applied Materials **15c**
Arco Chemical **4**
Argonaut Group **17b**
Armco **16b**
Armstrong World **6b**
Arvin Industries **2b**
Asarco **16c**
Ashland Coal **11a**
Ashland Oil **11b**
AST Research **18b**
AT&T **22a**
Atlantic Energy **24a**
Atlantic Richfield **11b**
Automatic Data **18c**
AutoZone **8**
Avery Dennison **15a**
Avnet **21b**
Avon Products **6d**
Aztar **14c**

B

Baker (J.) **8**
Ball **7a**
Baltimore G&E **24a**
Banc One **3b**
Bancorp Hawaii **3d**
Bandag **2c**
Bank of Boston **3a**
Bank of New York **3a**
BankAmerica **3d**
Bankers Trust New York **3a**
Banta **21d**
Bard (C.R.) **12d**
Barnes Group **13a**
Barnett Banks **3c**
Baroid **11c**
Bausch & Lomb **12d**
Baxter International **12d**
Bear Stearns **17a**
Bearings **21b**
Beckman Instruments **9c**
Bell & Howell **18a**
Bell Atlantic **22b**
BellSouth **22b**
Bemis **7b**
Bergen Brunswig **12a**
Bethlehem Steel **16b**
Betz Laboratories **4**
Beverly Enterprises **12c**
Bindley Western **12a**
Birmingham Steel **16b**
Black & Decker **15b**
Blair **8**
Block (H&R) **17a**
Block Drug **6d**
Blockbuster Ent **14b**
Blount **15a**
Boatmen's Bancshares **3b**
Bob Evans Farms **14a**
Boeing **1**
Boise Cascade **19a**
Borden **10b**
Borland Intl **18c**
Boston Edison **24a**
Bowater **19b**
Briggs & Stratton **15c**
Brinker International **14a**
Bristol-Myers Squibb **12b**
Brown Group **6a**
Brown-Forman **6c**
Bruno's **10c**
Brunswick **14d**
Burlington Northern **23b**
Burlington Resources **11b**
Butler Mfg **21a**
BWIP **15c**

C

C&S/Sovran **3c**
Caesars World **14c**
Caldor **8**
CalFed **17c**
Campbell Soup **10b**
Capital Cities/ABC **20a**
Cardinal Distribution **12a**
Carlisle **15a**
Carnival Cruise Lines **14d**
Carolina Freight **23d**
Carolina Power **24a**
Carpenter Tech. **16b**
Carter Hawley Hale **8**
Carter-Wallace **12b**
Casey's General **10c**
Caterpillar **15c**
CBS **20a**
CDI **21e**
Centel **22b**
Centerior Energy **24a**
Centex **13b**
Central & South West **24a**
Central Maine Power **24a**
Champion Intl. **19b**
Charming Shoppes **8**
Chase Manhattan **3a**
Chemical Banking **3a**
Chemical Waste **21c**
Chesapeake **19b**
Chevron **11b**
Chrysler **2a**
Chubb **17b**
Church & Dwight **6d**
Cigna **17b**
Cilcorp **24a**
Cincinnati Bell **22b**
Cincinnati G&E **24a**
Cipsco **24a**
Circle K **10c**
Circuit City Stores **6b**
Circus Circus **14c**
Citadel Holding **17c**
Citicorp **3a**
Clark Equipment **15b**
Clorox **6d**
CMS Energy **24a**
Coast Savings **17c**
Coastal **11b**
Coca-Cola **6c**
Coca-Cola Bottling **6c**
Coca-Cola Enterprises **6c**
Colgate-Palmolive **6d**
Comerica **3b**
Commerce Clearing **20b**
Commercial Metals **16b**
Commodore Intl **18b**
Commonwealth Ed. **24a**
Comm. Energy **24a**
Commtron **14b**
Compaq Computer **18b**
CompuCom Systems **18a**
Computer Associates **18c**
Computer Sciences **18c**
Comsat **22a**
ConAgra **10b**
Conner Peripherals **18b**
Conseco **17b**
Consolidated Edison **24a**
Cons. Freightways **23d**
Consolidated Papers **19b**
Consolidated Rail **23b**
Consolidated Stores **8**
Constar International **7a**
Continental Airlines **23a**
Continental Bank **3b**
Continental Medical **12c**
Control Data **18b**
Cooper Industries **9a**
Cooper Tire & Rubber **2c**
CoreStates Financial **3a**
Corning **15a**
Costco Wholesale **8**
CPC International **10b**
Crane **15a**
Crawford **17a**
Cray Research **18b**
Crestar Financial **3c**
Crompton & Knowles **4**
Crown Cork & Seal **7a**
CRSS **21a**
Crystal Brands **6a**
CSX **23b**
CUC International **18a**
Culbro **6e**
Cummins Engine **2b**
Curtice-Burns Foods **10b**
Cyclops Industries **16b**
Cyprus Minerals **16c**

D

Dairy Mart **10c**
Dana **2b**
Danaher **15b**
Dart Group **5**
Dayton Hudson **8**
Dean Foods **10b**
Deere **15c**
Delchamps **10c**
Dell Computer **18b**
Delmarva Power **24**
Delta Air Lines **23a**
Delta Woodside **15c**
Deluxe **18a**
Detroit Edison **24a**
Dexter **4**
Dial **5**
Diamond Shamrock
Diebold **18a**
Digital Equipment **18**
Dillard **8**
Dime Savings Bank
Dixie Yarns **15d**
Dole Food **10b**
Dollar General **8**
Dominion Resources
Donaldson **2b**
Donnelley (R.R.) **21c**
Dover **15c**
Dow Chemical **4**
Dow Jones **20b**
DPL **24a**
DQE **24a**

Continued on p

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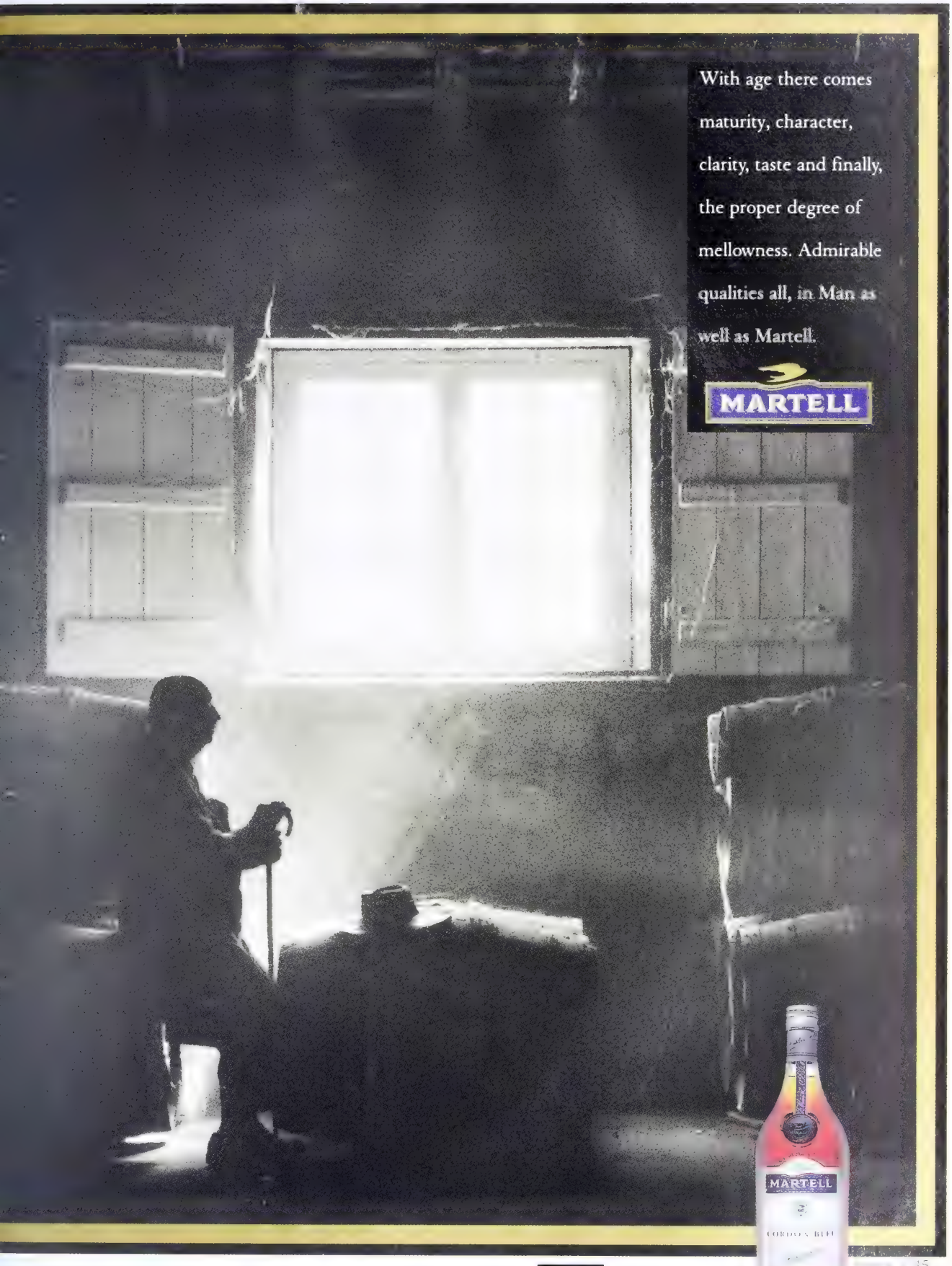
THE ART OF AGEING GRACEFULLY.



COGNAC. L'ART DE MARTELL.

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard catgory under which it is listed

Continued from p. 152

Dresser Industries **11c**
Drug Emporium **12a**
Du Pont **4**
Duke Power **24a**
Dun & Bradstreet **20b**
Duracell International **15a**
Durr-Fillauer Medical **12a**
DWG **15d**
Dynatech **18b**

E

E-Systems **9b**
Eagle-Picher Industries **2b**
Eastern Enterprises **24b**
Eastman Kodak **14d**
Eaton **2b**
Echlin **2b**
Eckerd (Jack) **12a**
Ecolab **6d**
Edison Brothers **8**
Edwards (A. G.) **17a**
EG&G **21a**
Electronic Data **18c**
Engelhard **4**
Enron **24b**
Enserch **24b**
Equifax **17a**
Ethyl **4**
Everex Systems **18b**
Exxon **11b**

F

Family Dollar Stores **8**
Fay's **12a**
Federal Express **23c**
Federal Home Loan **17a**
Federal Natl Mtg **17a**
Federal Paper Board **7b**
Federal Signal **2a**
Ferro **4**
FHP International **12c**
Fieldcrest Cannon **15d**
Figgie International **5**
Fina **11b**
Fingerhut **8**
First Bank System **3b**
First Chicago **3b**
First Fidelity **3a**
First Financial Mgmt **17a**
First Interstate Bancorp **3d**
First Mississippi **4**
First of America Bank **3b**
First Union **3c**
Firstar **3b**
Fisher-Price **14d**
Fleet/Norstar **3a**
Fleetwood Ents **14d**
Fleming **10a**
Florida Progress **24a**
Flowers Industries **10b**
Fluor **21a**
FMC **15c**
Food Lion **10c**
Foodarama **10c**
Ford Motor **2a**
Forest City **13b**
Foster Wheeler **21a**
Foundation Health **12c**
FPL Group **24a**
Freeport-McMoRan **4**
Freeport Copper **16c**
Fruit of the Loom **6a**
Fuller (H. B.) **4**

G

Gannett **20b**
Gap **8**
Gatx **23d**
GenCorp **1**
Genentech **12b**
General Cinema **5**
General Dynamics **1**
General Electric **5**
General Mills **10b**
General Motors **2a**
General Public Uts **24a**
General Signal **15c**
Genesco **8**
Genuine Parts **21b**
Georgia Gulf **4**
Georgia-Pacific **19b**
Gerber Products **10b**
Getty Petroleum **21b**
Giant Food **10c**
Gillette **6d**
Glatfelter (P. H.) **19b**
Glenfed **17c**
Golden West **17c**
Goodrich (B. F.) **4**
Goodyear Tire **2c**
Goulds Pumps **15c**
Grace (W. R.) **4**
Grainger (W. W.) **21b**
Granite Construction **21a**
Great A&P **10c**
Great Lakes Chemical **4**
Greyhound Lines **23d**
Grossman's **8**
Grow Group **4**
Grumman **1**
GTE **22b**
Guilford Mills **15d**
Gulf States Utilities **24a**

H

Handleman **21e**
Handy & Harman **16c**
Hanna (M. A.) **4**
Hannaford Brothers **10c**
Harcourt Brace **20b**
Harley-Davidson **14d**
Harman International **14d**
Harnischfeger **15c**
Harris **9b**
Harsco **15a**
Hartford Steam **17b**
Hartmarx **6a**
Hasbro **14d**
Hawaiian Electric **24a**
Hechinger **8**
Heekin Can **7a**
Heilig-Meyers **6b**
Heinz (H. J.) **10b**
Helene Curtis Industries **6d**
Hercules **4**
Hershey Foods **10b**
Hewlett-Packard **18b**
Highland Superstores **6b**
Hillenbrand **15a**
Hillhaven **12c**
Hills Department Stores **8**
Hilton Hotels **14c**
Holly **11b**
Home Depot **8**
Home Shopping **8**
HON Industries **18a**
Honeywell **9c**
Hormel (Geo. A.) **10b**
Houghton Mifflin **20b**
Howell **21b**
Hubbell **9a**
Huffy **14d**
Hughes Supply **13a**
Humana **12c**
Hunt (J. B.) **23d**
Huntington Bancshares **3b**

I

IBM **18b**
IBP **10b**
ICN Pharmaceuticals **12b**
Illinois Central **23b**
Illinois Power **24a**
Illinois Tool Works **15a**
IMC Fertilizer **4**
Imecera Group **12d**
Imo Industries **9c**
Imperial Holly **10b**
InaCom **21e**
Ingersoll-Rand **15c**
Inland Steel **16b**
Inspiration Resources **16c**
Intel **9d**
Intelligent Electronics **18a**
Interco **6b**
Interface **15d**
Intergraph **18c**
Interlake **15c**
International Flavors **6d**
Intl Multifoods **10b**
International Paper **19b**
International Specialty **4**
International Tech **21c**
Interpublic Group **21d**
Interstate Bakeries **10b**
Ipalco Enterprises **24a**
Itel **5**
ITT **5**

J

James River **19b**
Jamesway **8**
Johnson & Johnson **12d**
Johnson Controls **9c**
Jostens **15a**

K

Kmart **8**
Kaiser Aluminum **16a**
Kaman **21b**
Kansas City Southern **23b**
Karcher (Carl) **14a**
Kaufman & Broad **13b**
Kellogg **10b**
Kellwood **6a**
Kelly Services **21e**
Kemper **17b**
Kennametal **15b**
Kentucky Utilities **24a**
Kerr-McGee **11b**
KeyCorp **3a**
Keystone Intl **15a**
Kimball International **6b**
Kimberly-Clark **19b**
Knight-Ridder **20b**
Kroger **10c**

L

L. A. Gear **6a**
La-Z-Boy Chair **6b**
Lafarge **13a**
Lands' End **8**
Leggett & Platt **6b**
Leslie Fay **6a**
LG&E Energy **24a**
Lifetime **12c**
Lilly (Eli) **12b**
Limited **8**
Lincoln National **17b**
Litton Industries **9b**
Liz Claiborne **6a**
Lockheed **1**
Loctite **4**
Longs Drug Stores **12a**
Longview Fibre **7b**
Loral **9b**
Lotus Development **18c**
Louisiana Land **11b**
Louisiana-Pacific **19a**
Lowe's **8**
LSI Logic **9d**
LTV **5**
Lubrizol **4**
Lukens **16b**
Lyondell **4**

M

Magma Copper **16c**
MagneTek **9a**
Manor Care **12c**
Manufacturers Hanover **3a**
Manufacturers Natl **3b**
Manville **13a**
Mapco **11b**
Marion Merrell Dow **12b**
Mark IV Industries **15a**
Marriott **14c**
Marsh & McLennan **17a**
Marshall Industries **21b**
Martin Marietta **1**
Masco **6b**
Mattel **14d**
Maxtor **18b**
Maxus Energy **11b**
Maxxam **16a**
May Department Stores **8**
Maytag **6b**
McCormick **10b**
McDonald's **14a**
McDonnell Douglas **1**
McGraw-Hill **20b**
MCI Communications **22a**
McKesson **12a**
Mead **19b**
Media General **20b**
Medtronic **12d**
Mellon Bank **3a**
Melville **8**
Mercantile Stores **8**
Merck **12b**
Meredith **20b**
Meridian Bancorp **3a**
Merisel **18a**
Merrill Lynch **17a**
Merry-Go-Round **8**
Metropolitan Fincl **17c**
Meyer (Fred) **8**
Michael Foods **10b**
Michigan National **3b**
Micron Technology **9d**
Microsoft **18c**
Midlantic **3a**
Miller (Herman) **18a**
Millipore **9c**
Mine Safety **12d**
Minnesota Mining **15a**
Mirage Resorts **14c**
Mitchell Energy **11b**
MNC Financial **3a**
Mobil **11b**
Modine Mfg **2b**
Molex **9d**
Monsanto **4**
Montana Power **24a**
Morgan (J. P.) **3a**
Morgan Stanley **17a**
Morrison **14a**
Morrison Knudsen **21a**
Morton International **4**
Motorola **9b**
Multimedia **20a**
Murphy Oil **11b**

N

Nacco Industries **11a**
Nalco Chemical **4**
Nashua **7b**
National City **3b**
Natl Convenience **10c**
National Health **12c**
National Intergroup **5**
National Medical **12c**
National Semicond **9d**
National Service **9a**
Navistar International **2a**
NBD Bancorp **3b**
NCH **6d**
NCNB **3c**
Neiman Marcus Group **8**
Nevada Power **24a**
New England Electric **24a**
New York State E&G **24a**
New York Times **20b**
Newell **15a**
Newmont Gold **16c**
Newmont Mining **16c**
Niagara Mohawk **24a**
Nicor **24b**
Nike **6a**
Nipsco Industries **24a**
NL Industries **4**
Nordstrom **8**
Norfolk Southern **23b**
Northeast Utilities **24a**
Northern States **24a**
Northern Trust **3b**
Northrop **1**
Norwest **3b**
Novell **18c**
Nucor **16b**
Nynex **22b**

O

Occidental Pet **11b**
Office Depot **21b**
Ogden **5**
Ohio Edison **24a**
Oklahoma G&E **24a**
Olin **4**
Olsten **21e**
Oracle Systems **18c**
Orange & Rockland **24a**
Oryx Energy **11b**
Oshkosh B'Gosh **6a**
Owens & Minor **12d**
Owens-Corning **13a**
Oxford Industries **6a**

P

Paccar **2a**
Pacific G&E **24a**
Pacific Telecom **22a**
Pacific Telesis Group **22b**
PaineWebber Group **17a**
Pall **5**
Pamida Holdings **8**
Panhandle Eastern **24b**
Paramount Comms **14b**
Parker Hannifin **15a**
Penn Central **5**
Penn Traffic **10c**
Penney (J. C.) **8**
Pennsylvania Power **24a**
Pennzoil **11b**
Pentair **15c**
Pep Boys **8**
PepsiCo **6c**
Perkin-Elmer **9c**
Perry Drug Stores **12a**
Pet **10b**
Petrie Stores **8**
Pfizer **12b**
Phelps Dodge **16c**
PHH **23c**
Philadelphia Electric **24a**
Philip Morris **6e**
Phillips Petroleum **11b**
Phillips-Van Heusen **6a**
PHM **13b**
Pic 'N' Save **8**
Pier 1 Imports **6b**
Pinkerton's **21e**
Pinnacle West **24a**
Pioneer Hi-Bred **10b**
Pitney Bowes **18a**
Pittston **11a**
Pittway **5**
Ply Gem Industries **13a**
PNC Financial **3a**
Polaroid **14d**
Pope & Talbot **19a**
Portland General **24a**
Potlatch **19b**
Potomac Electric **24a**
PPG Industries **13a**
Precision Castparts **16c**
Premark International **5**
Premier Industrial **21b**
Preston **23d**
Price **8**
Primerica **17a**
Procter & Gamble **6d**
Progressive **17b**
Promus **14c**
Provident Life **17b**
PSI Resources **24a**
PS Co. of Colorado **24a**
PS Co. of New Mex **24a**
Public Service Ent **24a**
Puget Sound Power **24a**

Q

Quaker Oats **10b**
Quaker State **11b**
Quanex **16b**
Quantum **18b**
Quantum Chemical **4**
QVC Network **8**

R

Ralston Purina **10b**
Raychem **9a**
Raytheon **9b**
Readers Digest **20b**
Reebok International **6a**
Republic New York **3a**
Reynolds Metals **16a**
Rhone-Poulenc Rorer **12b**
Richfood Holdings **10a**
Rite Aid **12a**
RJR Nabisco **6e**
Roadway Services **23d**
Rochester G&E **24a**
Rochester Telephone **22b**
Rohm & Haas **4**
Rohr Industries **1**
Rollins **21e**
Rose's Stores **8**
Ross Stores **8**
RPM **13a**
Rubbermaid **15a**
Ruddick **10c**
Russell **6a**
Ryder System **23c**
Rykoff-Sexton **10a**
Ryland Group **13b**

S

Safeco **17b**
Safeguard Scientifics **18c**
Safety-Kleen **21e**
Safeway **10c**
Salomon **17a**
San Diego G&E **24a**
Santa Fe Pacific **23b**
Sara Lee **10b**
Scana **24a**
SCEcorp **24a**
Schering-Plough **12b**
Schlumberger **11c**
Schulman (A.) **4**
Schwab (Charles) **17a**
Scott Paper **19b**
Scripps (E. W.) **20b**
Seaboard **10b**
Seagate Technology **18b**
Sears, Roebuck **8**
Seaway Food Town **10c**
Security Pacific **3d**
Service Corp. Intl **21e**
Service Merchandise **8**
Shaw Industries **15d**
Shawmut National **3a**
Sherwin-Williams **13a**
Shoney's **14a**
Signet Banking **3c**
Silicon Graphics **18b**
Sizzler International **14a**
Smith (A. O.) **2b**
Smith's Food & Drug **10c**
Smithfield Foods **10b**
Smucker (J. M.) **10b**
Snap-on Tools **15b**
Society **3b**
Sonat **24b**
Sonoco Products **7b**
Southdown **13a**
Southern **24a**
So. New Eng. Tel. **22b**
Southwest Airlines **23a**
Southwestern Bell **22b**
Southwestern PS **24a**
Spiegel **8**
Springs Industries **15d**
SPX **15b**
St. Paul **17b**
Standard Federal **17c**
Standard Motor **2b**
Standard Products **2b**
Standard Register **18a**
Standex Intl **13a**
Stanhome **6d**
Stanley Works **15b**
Staples **21b**
State Street Boston **3a**
Stewart & Stevenson **15c**
Stone Container **7b**
Stop & Shop **10c**
Storage Technology **18b**
Stratus Computer **18b**
Strawbridge & Clothier **8**
Stride Rite **6a**
Student Loan Mktg **17a**
Sun Microsystems **18b**
Sundstrand **1**
SunTrust Banks **3c**
Super Food Services **10a**
Super Rite **10a**
Super Valu Stores **10a**
Supermarkets Gen **10c**
Syntex **12b**
Sysco **10a**

T

Tambrands **6d**
Tandem Computers **18b**
Tandy **18b**
TBC **21b**
TCF Financial **17c**
Tech Data **18a**
Teco Energy **24a**
Tecumseh Products **13a**
Tektronix **9c**
Teledyne **5**
Teleflex **1**
Temple-Inland **7b**
Tenneco **5**
Teradyne **9c**
Texaco **11b**
Texas Industries **13a**
Texas Instruments **9d**
Texas Utilities **24a**
Textron **5**
Thiokol **1**
Thomas & Betts **9a**
Thorn Apple Valley **10b**
3M **15a**
Tiffany **8**
Time Warner **20b**
Times Mirror **20b**
Timken **15c**
TJX **8**
TNP **24a**
Torchmark **17b**
Toro **6b**
Tosco **11b**
Toys 'R' Us **8**
Tredegar Industries **15a**
Tribune **20b**
Trinity Industries **23c**
Trinova **15a**
TRW **5**
Tucson Electric **24a**
Tultex **6a**
Tyco Laboratories **15c**
Tyco Toys **14d**

U

U. S. Bancorp **3d**
U. S. Healthcare **12c**
U. S. Home **13b**
U. S. Shoe **8**
U. S. Surgical **12d**
UAL **23a**
UJB Financial **3a**
Unifi **15d**
Union Bank **3d**
Union Camp **19b**
Union Carbide **4**
Union Electric **24a**
Union Pacific **23b**
Union Texas **11b**
Unisys **18b**
United Illuminating **24a**
United Stationers **2**
United Technologies **5**
United Telecomms. **5**
Unitrin **17b**
Univar **21b**
Universal **6e**
Universal Health **12**
Unocal **11b**
Unocal Exploration **9**
UNUM **17b**
Upjohn **12b**
US West **22b**
USAir Group **23a**
USG **13a**
USLife **17b**
UST **6e**
USX-Marathon **11b**
USX-U. S. Steel **16b**

V

Valero Energy **11b**
Valspar **13a**
Varian Associates **9**
Venture Stores **8**
VF **6a**
Viacom **20a**
Village Super Market **8**
Volt Inf. Sciences **21**
Vulcan Materials **13**
VWR **21b**

W

Waban **8**
Wachovia **3c**
Wackenhut **21e**
Wal-Mart Stores **8**
Walgreen **12a**
Wallace Computer **7**
Wang Laboratories **18**
Warner-Lambert **12**
Washington National **3**
Washington Post **2**
Waste Management **1**
Weirton Steel **16b**
Weis Markets **10c**
Wellman **4**
Wells Fargo **3d**
Westinghouse Electric **9**
Westmark Intl. **12d**
Westmoreland Coal **8**
Westvaco **19b**
Wetterau **10a**
Weyerhaeuser **19a**
Wheelabrator Techs **6**
Wheeling-Pittsburgh **5**
Whirlpool **6b**
Whitman **5**
Wickes **15d**
Willamette Industries **7**
Willcox & Gibbs **21**
Williams **24b**
Winn-Dixie Stores **1**
Wisconsin Energy **2**
Witco **4**
WLR Foods **10b**
Woolworth **8**
Worthington Inds. **1**
WPL Holdings **24a**
Wrigley (Wm.) Jr. **1**

XYZ

Xerox **18b**
Yellow Freight **23d**
Zenith Electronics **6**
Zenith National **17**
Zurn Industries **24a**

Footnotes on page 131

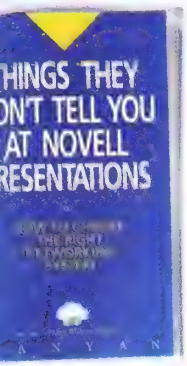
lightmare Scenario #1

THE UNDETECTED TIME BOMB.

he biggest networking disasters always start small.

The problems tend to begin when you need to grow.

Suddenly, the computer etwork that worked so well doesn't seem to work at all.



d for this booklet of hard, comparative ormation.

You have to hire more network administrators. Spend more money. Retrain. Reconfigure.

And every time you row, even a little bit, your network gets harder to manage, arder to use, and harder to fund.

Switching over to VINES isn't just smart, it's easy.

It's a question of architecre. A network like Novell's etWare® is not an integrated ystem. Adding new users of ervices means having to pdate user profiles, retrain mployees, and troubleshoot onnectivity problems.

Banyan's architecture is esigned to grow effortlessly. Ease of growth is why we're he leader in true enterprise-ide pc networking.)

Whether you're growing from 10 users to 100 or even 10,000, your Banyan VINES' *architecture stays the same.*

Even if your network grows to span continents, the cost of managing the network will be kept to a minimum.

VINES can save you a fortune. That's indisputable.

What's more, VINES' open, standards-based architecture lets you adopt whatever new products come along–whether it's one of today's powerful new "super servers" or some of the thousands of network-based applications available for VINES.

Whatever your specific requirements–Global Naming, Security, WAN interconnection, Global Administration, Multi-processing, or Multilingual capability–Banyan can deliver immediately. Now.

Easy, economical growth must be planned in. It can't be tacked on.

You don't have to scrap the network you have now in order to switch to VINES. We can make your transition simple and inexpensive.

Get the facts. We've prepared a booklet, "THINGS THEY DON'T TELL YOU AT NOVELL PRESENTATIONS." You'll find it a useful source of comparative information.

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The more you know, the more you will want Banyan. We can simplify the use and management of your distributed network.

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Please send this coupon to: BANYAN, BW
120 Flanders Road, Westboro, MA 01581

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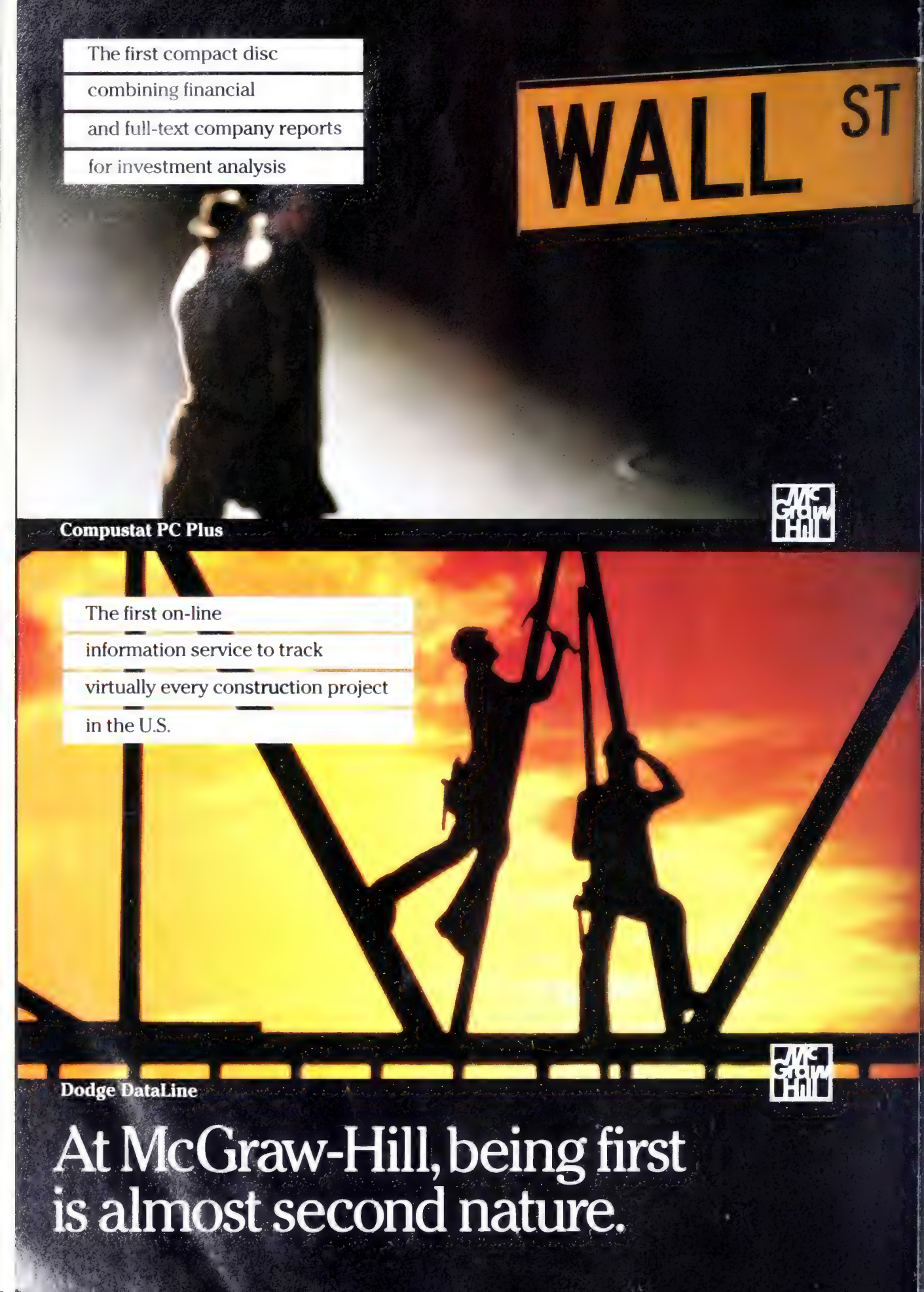
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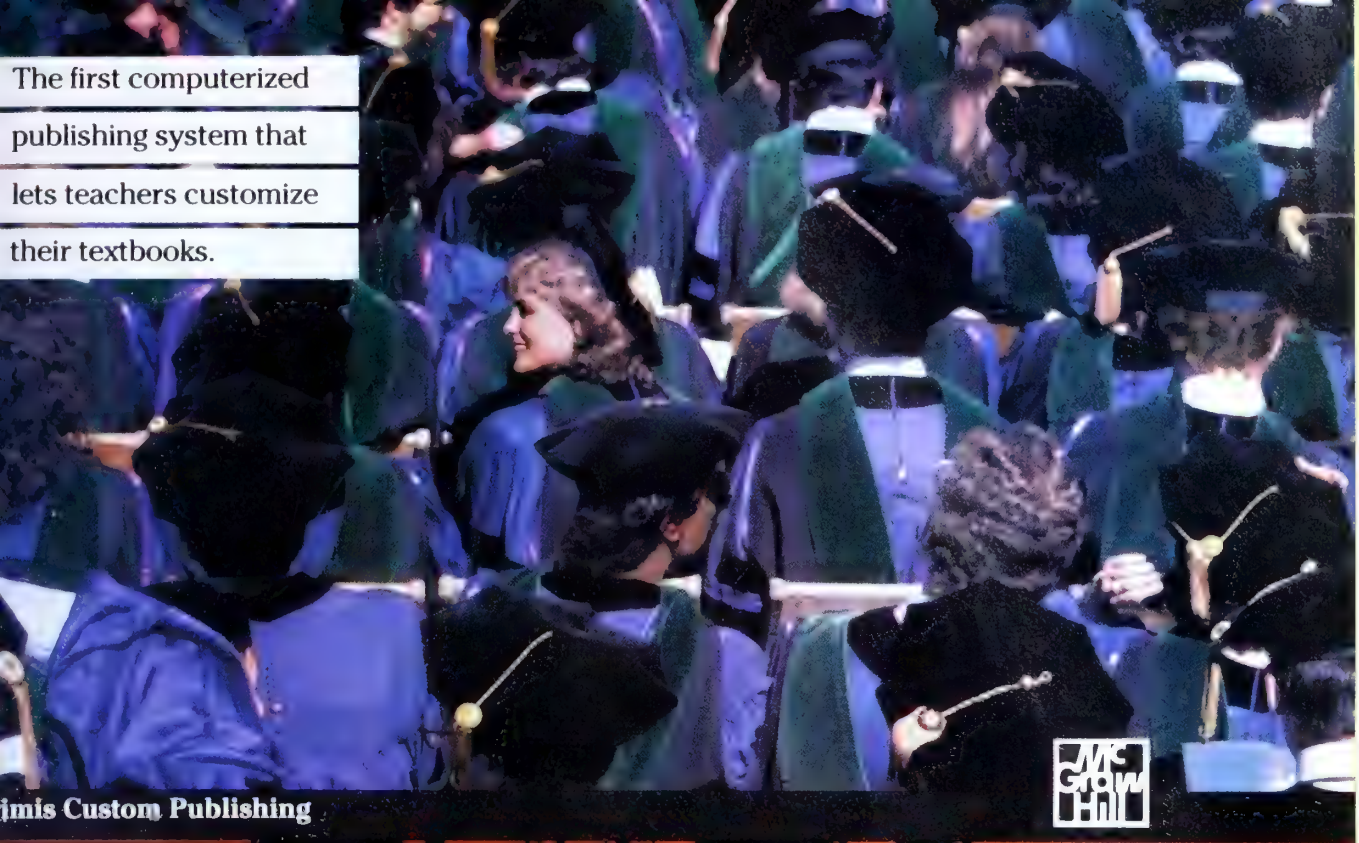

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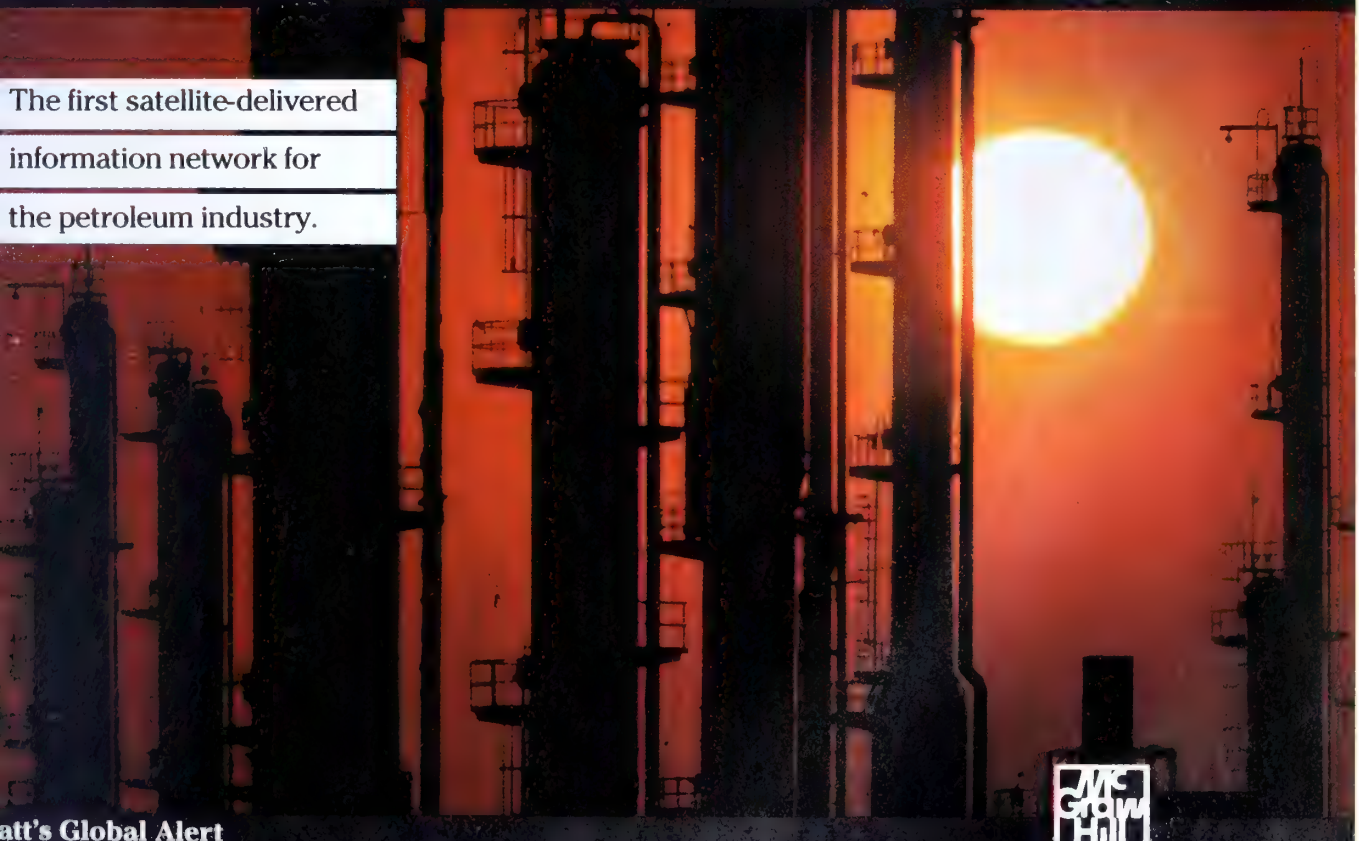

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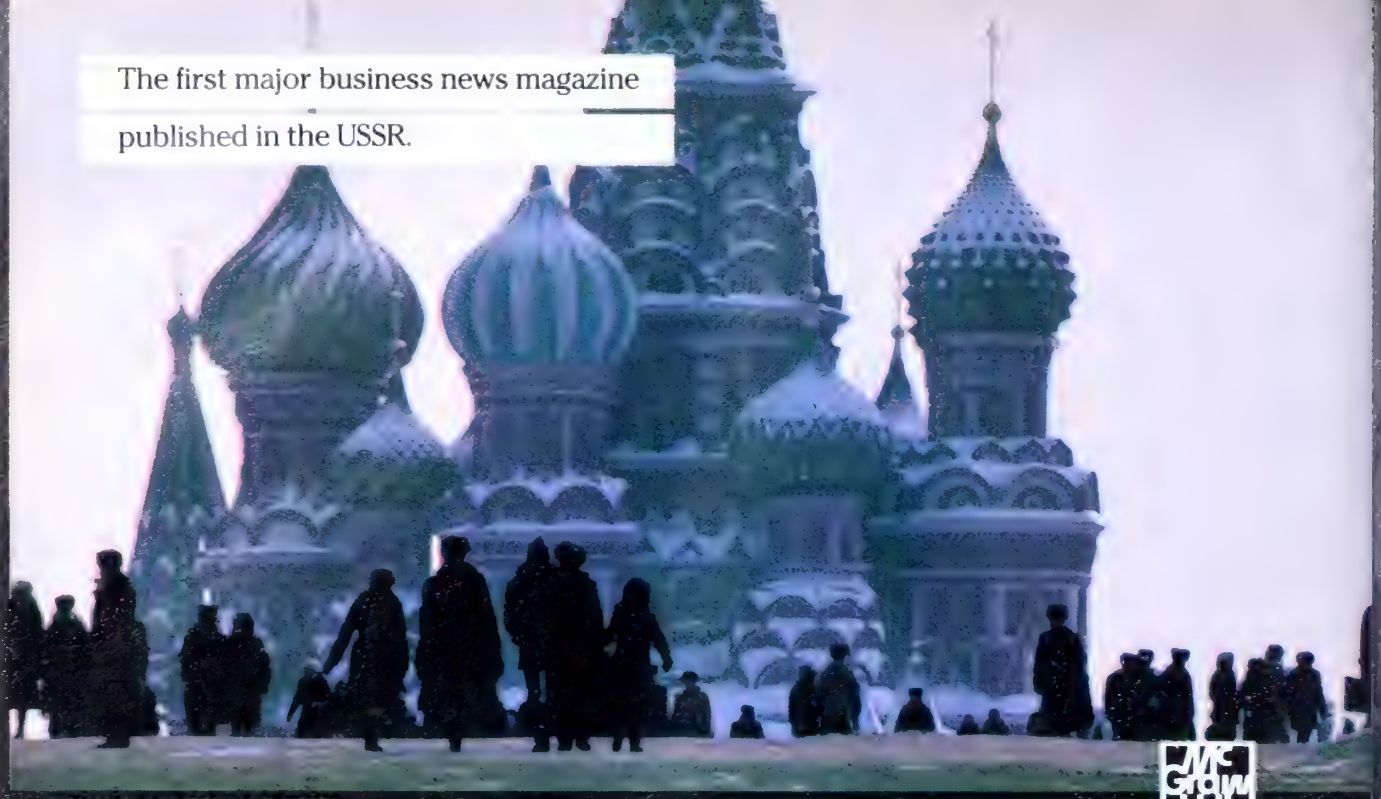

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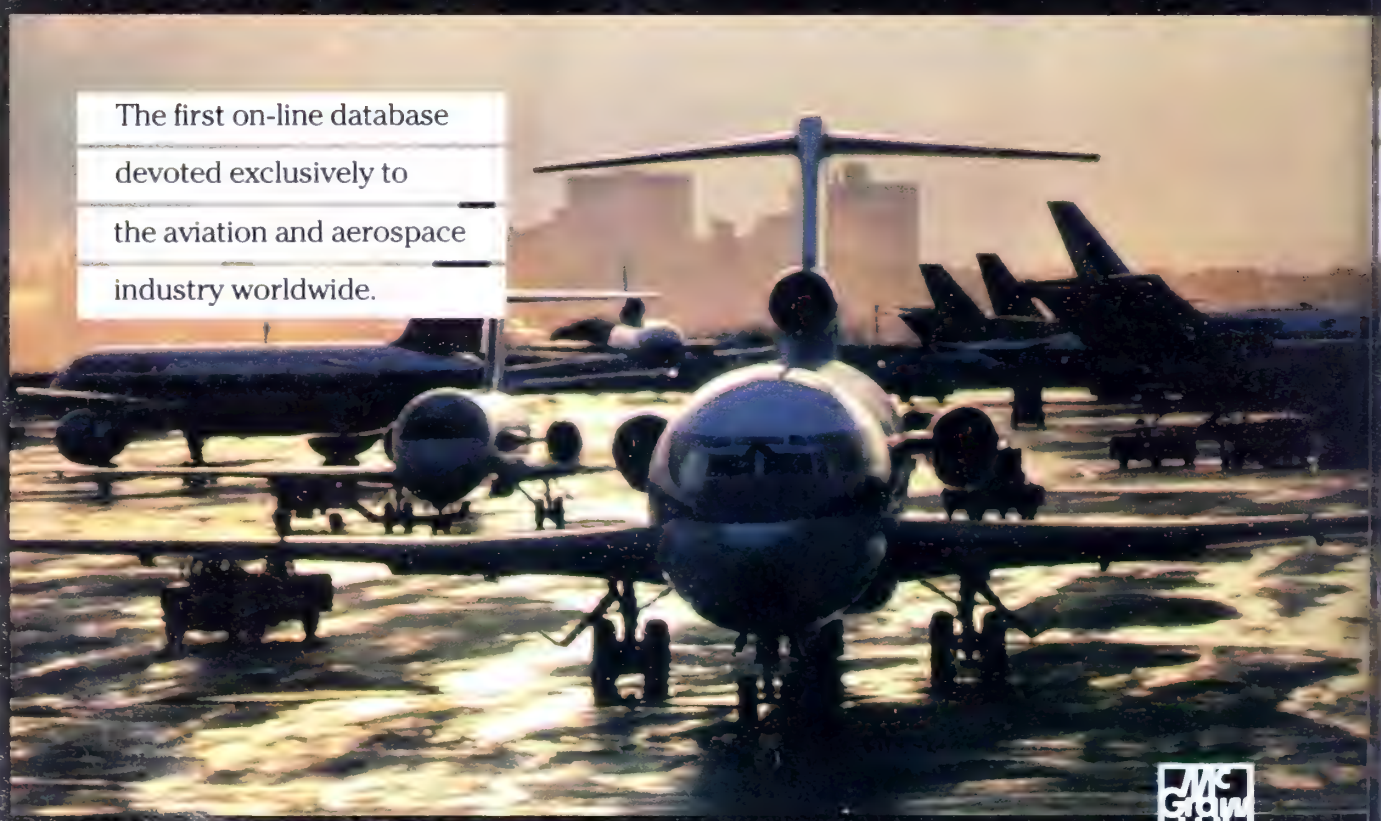

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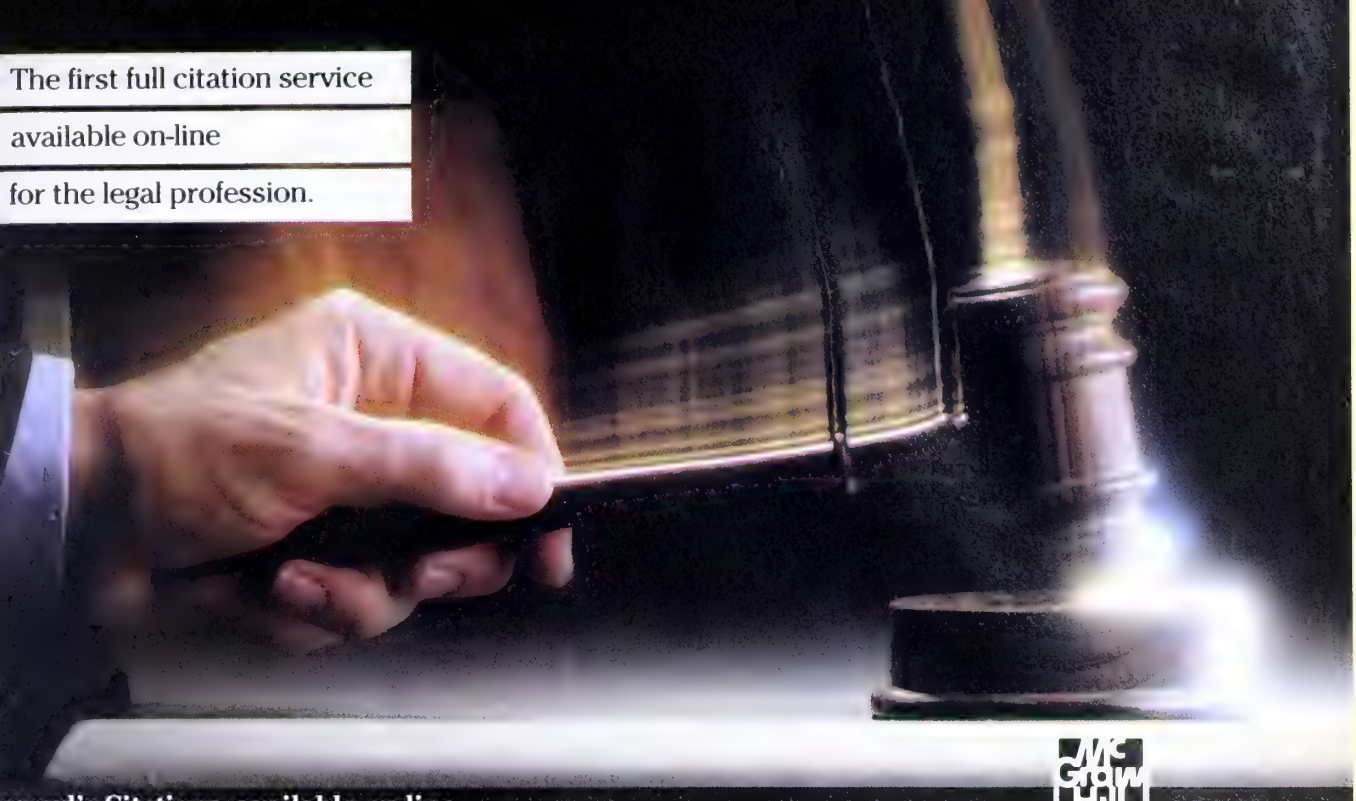

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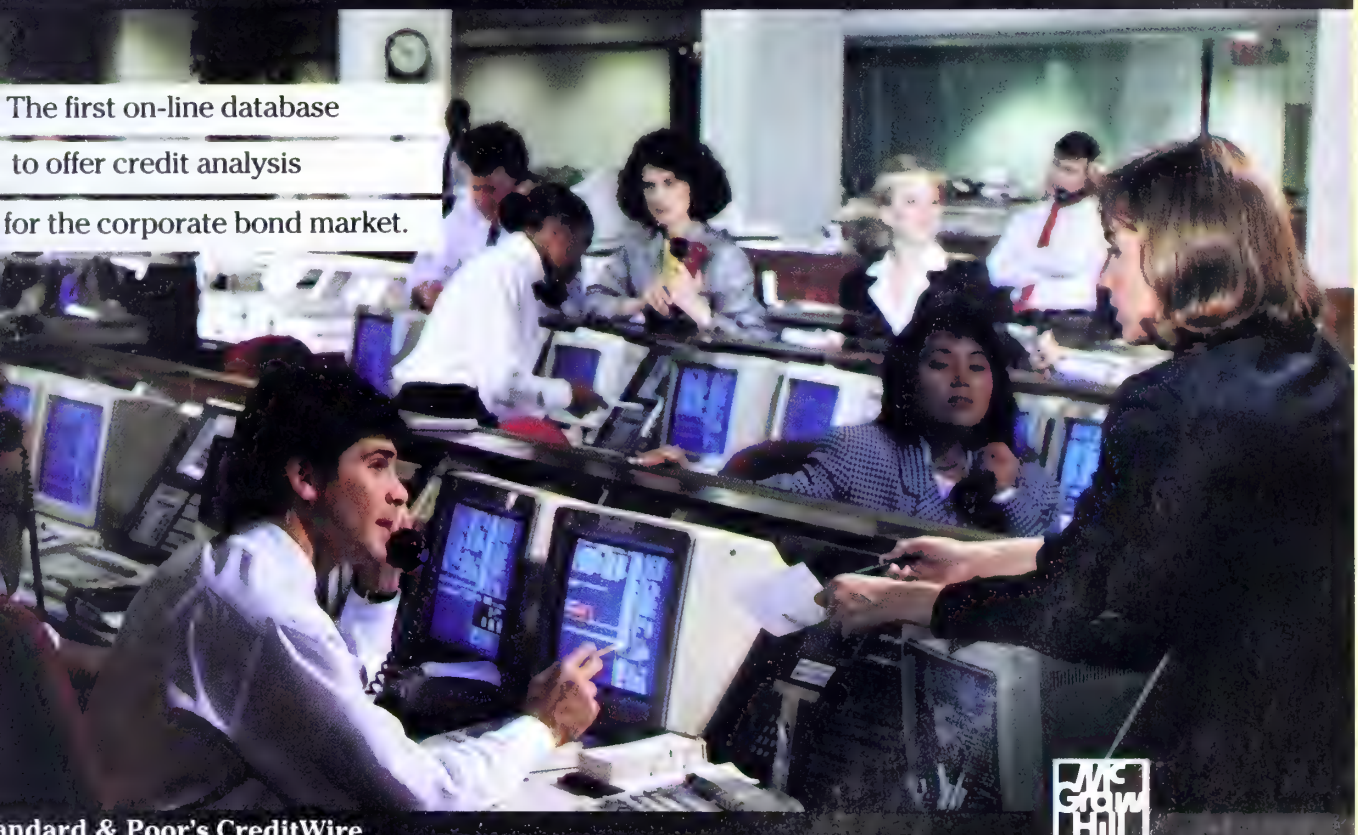

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EDITED BY AMY DUNKIN

Computers

STATE-OF-THE-ART—AND BUILT TO STAY THAT WAY

As the recession wears on, the last thing personal-computer makers need is for potential customers to sit on the sidelines, paralyzed by the fear that their machines will become obsolete within months of purchase. Still, buyers are justifiably wary. Just two years ago, most people were taking home PCs powered by Intel's 80286 chip, with 20 megabytes of hard-disk-drive storage, and 1 or 2 megabytes of memory. Now, Intel is selling a 486 chip and talking about a 586. At least 60 megabytes of storage and 4 megabytes of memory are standard.

To tackle the obsolescence dilemma, the computer industry has hit on a solution: upgradable personal computers. The idea is that when computer owners start to feel that their PCs aren't fast enough, don't have enough data storage, or don't have enough memory to run new software, they can simply swap the old part for a more powerful new component.

SCREWDRIVER JOB. The concept isn't exactly new. For decades, big companies have been updating mainframes with new disk drives and memory. But upgrading those big machines can take days and requires the work of trained specialists. And with PCs, it has been possible to increase power, in the form of add-on cards that bring networking capabilities, for instance, to the machine.

Now, PC companies from IBM to Compaq to Acer are manufacturing a new breed of upgradable PCs. What's new? This year's models are especially easy to update—the owner can often do the job in about 15 minutes with nothing more complicated than a screwdriver. Compaq Computer and the others now sell upgrade parts, too. Most often it's a processor or memory chip, built onto a flat card. And the PCs are designed to accommodate new parts so that they can work well with the older components in the machine.

Here's how it could work. Say you've recently bought Dell Computer's 333P. Priced at about $2,499, it runs on a 80386 chip. Six months from now, you're a computer whiz. You've got all the records for your small business loaded onto the machine, you're getting ready to do your 1991 tax returns, and you're thinking about producing a brochure to advertise your company. Suddenly, the machine starts slowing down, and that's driving you nuts: You want more speed. To move your 333P up a notch, to 486 performance, you can buy a $1,299 486-card, slip the top off the PC, and slide the card in. The old 386 chip is automatically disabled once you install the upgrade card.

SMART PARTS. Some PCs are harder to upgrade than others. Some models, including the Dell, require you to run time-consuming software programs that help the machine upgrade itself. With others you must fit tiny pieces into a small space: Imagine having to line up the 130 pins on the back of a microprocessor with the appropriate holes in the computer.

To avoid that, look for PCs that were designed to be upgradable. That will en

e that the machine is fairly ple to update, that up- de parts can be found easi- and that instructions for forming the work are dily available.

n September, Compaq an- nced such a product line, Deskpro/M, which starts $3,099. Compaq calls these chines "intelligent," be- se when one component in- is updated, the PC auto- ically upgrades the rest of computer to work with it. you have to do is snap in new piece.

Maybe the easiest machine pgrade is Tandon's Option When you first buy the ion, Tandon lets you mix match processors, disk es, and memory—you pick only the components that want. A 386-based system run about $3,500. Later, rading the Option is as as putting a videotape he VCR: The whole process es less than 30 seconds. slide out one module and in the replacement, which s from $895 to $2,795. Disk es can be updated in the e way. No screwdriver is uired.

or now, there's little hard dence of how well upgrad- really works for computer ers. That's because few ple have tried it. Last r, less than 5% of the cus- ers who had machines could be upgraded actu- did so, says PC maker AST earch, one of the pioneers pgradable PCs.

CHANGE. As AST points though, those who own radable PCs bought them ly recently and haven't the need to update them But that could change , thanks to new software will hit the market next r. Take IBM's upcoming /2 2.0 operating-system ware, which provides a PC h its basic instructions. /2 will need a minimum of megabytes to 30 mega- es of hard-disk space in or- to operate. To run applica- s programs such as word processing sofware with OS/2, you'll need much more space. Multimedia software—the programs that let your PC combine data with video and sound—also needs lots of power to run.

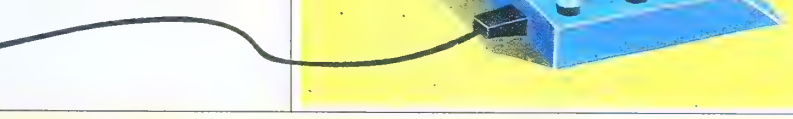
And buyers who are newly hooked on Microsoft's popular Windows 3.0 software, which has sold 7 million copies since its introduction 18 months ago, are itching to upgrade their machines to accommodate the new applications that work with Windows. To run well, the programs need to be installed in PCs running on 386-type chips.

Another reason to buy upgradable PCs: They're a lot easier to repair. In the past, a processor failure often meant shipping the whole computer off for weeks or months to a dealer or repair shop. Upgradable models, however, let you do the work at home, with minimal hassle.

For more speed or more storage, you just swap an old PC component for a new one

POPULAR UPGRADEABLE PCs

Special features	Price
ALR VIP M	
ALR's first upgradeable PC was announced in July, 1989. Upgrades cost from $895 to $1,395	$3,495-$4,795
AST PREMIUM II	
An upgradeable pioneer, AST announced its first such machine in October, 1986. Upgrade cards cost $1,595 to $2,595	$2,795-$5,795
COMPAQ DESKPRO/M	
Five separate parts can be swapped out and upgraded. Once one part of the system is updated, the rest of the machine automatically adjusts. Upgrades cost $999 to $2,099	$3,099-$7,199
DELL SYSTEM 333P	
Old microprocessor remains in place when new one is added, making the upgrade easier. Dell's processor upgrade option costs $1,299	$1,999-$3,799
IBM PS/2 57 SX	
Uses its own microprocessor for upgrades, instead of a standard chip, for greater speed enhancement. The upgrade option, which can boost speed up to 88%, costs $780	$3,625-$4,195
TANDON OPTION	
Upgrade can be completed in under one minute. Buyers can customize the PC by mixing and matching disk drives, processors, and memory. Upgrade modules cost $895 to $2,795	$2,239-$4,139



And if you're a nervous Nellie, the promise of being able to improve your machine over time should make you feel better about the prospect of buying one. Corporate computer buyers say they have an easier time selling their bosses on a big PC purchase if they tell them about the upgrade capability.

STANDARD ISSUE? But there are drawbacks—including economic ones. Upgradable PCs cost slightly more than similarly equipped nonupgradable models. Sometimes, it's cheaper simply to trade in your machine for a new one. That's because, while installing a new processor as part of an upgrade will be about one-quarter the cost of a whole new machine, chances are if you're ready to upgrade the microprocessor, you're also ready for more memory, a bigger hard-disk drive, a monitor with better resolution—maybe even a new keyboard. And by the time you're through with all the parts, you may be better off donating your old machine to a school or charity.

In the near future, upgradable PCs will be standard issue, and few—if any—companies will be designing computers in the old way. That will make their customers happy. But they've got another big incentive to do it: In the long run, it's cheaper. That's because making upgradable PCs requires the design of the parts to be standardized, allowing the PC maker to slim down inventories by using the same components for different models.

Of course, if you want to buy a PC now, that just raises that old obsolescence dilemma: Should you wait until the upgradable features become standard?

Here's the bottom line. If you're looking for a personal computer, the ability to upgrade is reasonable to include on the list of features you want. Think of it this way: Even if you never use it, the option can be reassuring—particularly when you're writing out a big check for your new PC. *Deidre Depke*

Finances

EASING THE STING OF STUDENT LOANS

When Cynthia Jackman Clark got her law degree from Suffolk University in 1990, she needed time off to study for the bar. But she had a problem: The $550-a-month bills for her $33,000 in student loans were to start rolling in only 60 days after graduation. That, along with rent and grocery bills, left her feeling "a little overwhelmed."

But Clark, now an attorney in Worcester, Mass., found a solution. She won a year's forbearance from her two lenders, giving her the necessary break from working. The delay boosted her average interest charges slightly but avoided the ugly credit-marring alternative of a default.

For many grads, paying student-loan bills is getting tougher. But as defaults climb past the 7% rate nationwide, both primary lenders and agencies that buy and administer loans, such as the Student Loan Marketing Assn. (Sallie Mae), are coming up with ways to help.

LET'S TALK. The simplest solution is to request a deferment, which can put off payments for six months to three years—without interest accruing on federally subsidized loans. Borrowers can qualify on 15 grounds, including inability to find a job, serving in the military or Peace Corps, or going back to school.

People who don't plan to take up arms or textbooks can negotiate the more costly forbearance option with loan administrators. Generally, interest accrues during the forbearance period. Depending on the terms, the lender can require periodic interest payments or add the interest onto the loan balance.

A cheaper alternative is graduated repayment. This trims loan payments in the early years and steps them up later to suit the borrower's growing income. A borrowe with an 8% loan of $10,00 would normally pay $122 month. With graduated repay ment, the bill could b changed to $75 a month fo the first three years, $125 fo the second three, and $180 fo the remaining four.

BLENDED RATE. For borrower with several loans, debt cor solidation is another possibil ty. Consider the graduat with $23,000 out in thre loans, one with a 12% annua interest rate and the others a 8% and 5%. By consolidatin the loans at a 9% rate an doubling the payback perio to 20 years, the borrower get some breathing room— though it would cost $14,33 in added interest charges.

The last choice you want t make is doing nothing, since default means the bills com due immediately. "If peopl know they can't pay, jus call," says Diane Saunders spokeswoman for Nellie Ma the New England Educatio Loan Marketing Corp. "We'r not going to bite your hea off." *Michelle Singletar*

Smart Money

SMALLER THAN BLUE CHIPS, SAFER THAN NEW CHIPS

Small-cap stocks have gotten great fanfare lately, and with good reason. As measured by the NASDAQ composite index, they are already up 44% this year, compared with a 15% rise in the Dow Jones industrial average. But halfway between blue chips and new chips lies a stock group whose day in the sun may just be dawning. Since June, when Standard & Poor's introduced the S&P MidCap 400 index, investors have a performance benchmark for a stock universe that could combine the best of both worlds. (S&P is a subsidiary of McGraw-Hill, which owns BUSINESS WEEK.)

The stocks that make up the index, with a median market capitalization of about $700 million, together have greater growth potential than bigger ones but less volatility than smaller ones. At a time when the economy is struggling, small stocks usually outperform blue chips, because niche companies tend to be more independent of overall economic trends. Meanwhile, the inclusion of some large companies in the index should offset the smaller ones' riskiness.

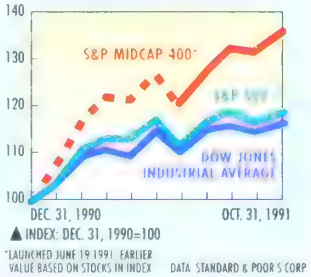
So far, only one mutual fund has sprung up to mirror the S&P 400 performance: Dreyfus People's MidCap Index Fund (800 782-6620). The no-load fund started in August with $5 million in assets. Minimum investment is $2,500, and total return through Oct. 30 was 9.04%.

COMING FAD. Other fund managers will probably follow Dreyfus in the next year, especially once trading begins in derivative products such as futures and options. Futures contracts indexed to the S&P 400 will trade on the Chicago Mercantile Exchange beginning this spring, and the American Stock Exchange will trade midcap-indexed options.

The concept of midcap investing is hardly new. Vanguard's 15-year-old Index Trust-Extended Market Portfolio is tied to the Wilshire 4500 index. It's called "extended" because it includes many small-cap stocks as well as blue chips. But aggressive growth investors should keep in mind that an actively managed portfolio will generally do better than a "passive" investment that follows an index.

For risk-averse value investors, though, the midcap universe may be an attractive place. "Small and midcap stocks have outperformed blue chips by a lot in the last year, but they're still relatively cheap," says Greg Melvin, vice-president at Federated Investors. The average price-earnings ratio for the S&P 400 is about 21, compared with 29 for the Dow. If the fad continues, investors who jump in before prices overheat could have plenty to be thankful for next year. *Joan Warner*

MIDCAPS: FAR FROM MIDDLING



RGAIN SEMENT OKERS

he 1970s, a new breed brokers took on the errill Lynches and Webbers of the world arging clients a fraction standard commissions. then, Charles Schwab, y, Quick & Reilly, and discounters have ed away close to 20% of lual investors' business. ow, a growing no-frills gent of "deep discount- s snipping away at that hare with fees that are heaper.

p discounters charge up % less than full-service rs and 60% less than the ree discounters (table). trade of 200 shares at r share, you might pay t a full-service broker- 87 at a discounter, and a deep discounter, such os Angeles-based c Brokerage, ac- g to Mercer Finan- ervices' annual Dis- brokerage survey 5; 800 582-9854 or 07-6800). The deep- nt group encom- s the 30 least ex- e brokers on the mpany list.

A-QUOTE. The typi- ep discounter is a operation that does national advertising erves from a few ed to a few hun- thousand investors usually make more 10 or 20 trades a The companies run gamut from the bare- Wall Street Discount (800 221-7870), which ne office in Manhattan harges clients postage ending out information curities, to larger firms lmost rival the services e big three discounters. terhouse Securities (800 39), for instance, has 30 hes in 20 states, offers access to more than 400 no-load mutual funds, and is trying to get check-writing privileges. Acutrade (800 228-3011), with offices in Omaha, St. Louis, and Los Angeles, and York Securities (800 221-3154), in New York City, offer 24-hour touch-tone phone access to a computer that provides trading quotes and account information and allows you to make trades.

Even Fidelity has a version of a deep discounter, called Spartan Brokerage (800 544-5115). One of the few deep discounters that spells out conditions for clients, Spartan requires a minimum of 50 trades a year and at least $20,000 in the account. Brown & Co. (800 225-6707), one of the cheapest deep discounters, maintains even more stringent requirements, including at least $10,000 in cash to open an account and five years' trading experience.

Deep discount customers are usually fairly active traders who don't have to rely on a stockbroker for research or investment tips. Bart Koslow, for example, a retired financial manager in Sarasota, Fla., does market research every day and executes about 100 transactions a year through York Securities.

DOUBLE ACCOUNTS. Less experienced investors may need more handholding than a deep discounter provides. The big three offer 24-hour access to live brokers and usually more research or sources of information about companies and investments. They also have high-profile branches all over the country. "Someone who doesn't trade that much might be more comfortable going to a bigger, more well-known firm," says Mark Coler, president of Mercer. But deep discounters execute trades exactly the same way as other brokerages. And their accounts are insured for up to $500,000 each by the Securities Investor Protection Corp. and may have more coverage from other insurers. As far as safety is concerned, "I don't know why an active trader would not go to a deep discounter," Coler adds.

Of course, you can keep accounts at more than one brokerage. That way, you can get investment advice or other services from a full-service or discount firm when you need them and execute cut-rate trades through a deep discounter when you do the homework. *Pam Black*

HOW THE PRICES COMPARE

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Company/Phone	Commission*
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PACIFIC BROKERAGE 800 421-8395	25.00
SEAPORT SECURITIES 800 221-9894**	34.00
KENNEDY CABOT 800 252-0090	35.00
PACE SECURITIES 800 221-1660	35.00

THE COMPETITION

QUICK & REILLY 800 926-0600	65.58
FIDELITY BROKERAGE 800 225-1799	86.75
CHARLES SCHWAB 800 435-4000	87.00

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■ **NATURE'S GIFTS.** At least 60% of the proceeds from cards and gifts in the National Wildlife Federation's 1991 catalog goes to conservation and education programs. For a free catalog, call 800 432-6564.

■ **LOW LOADS.** The *Investor's Guide to Low-Cost Mutual Funds* lists 450 low- and no-load funds. Twice-yearly issues are $5 each from the Mutual Fund Education Alliance located at 1900 Erie St., Suite 120, Kansas City, Mo. 64116.

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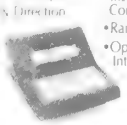

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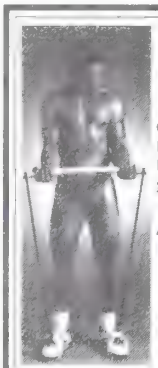

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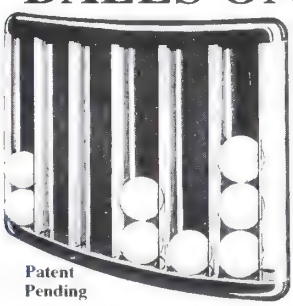

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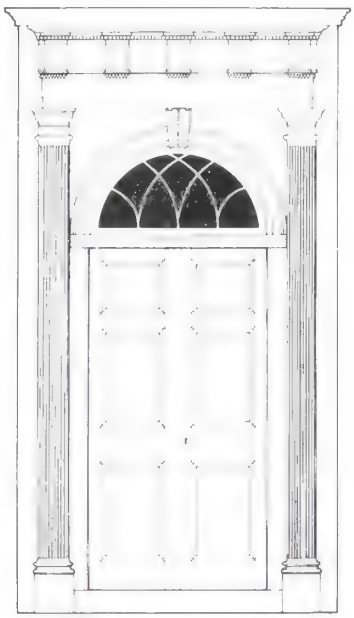

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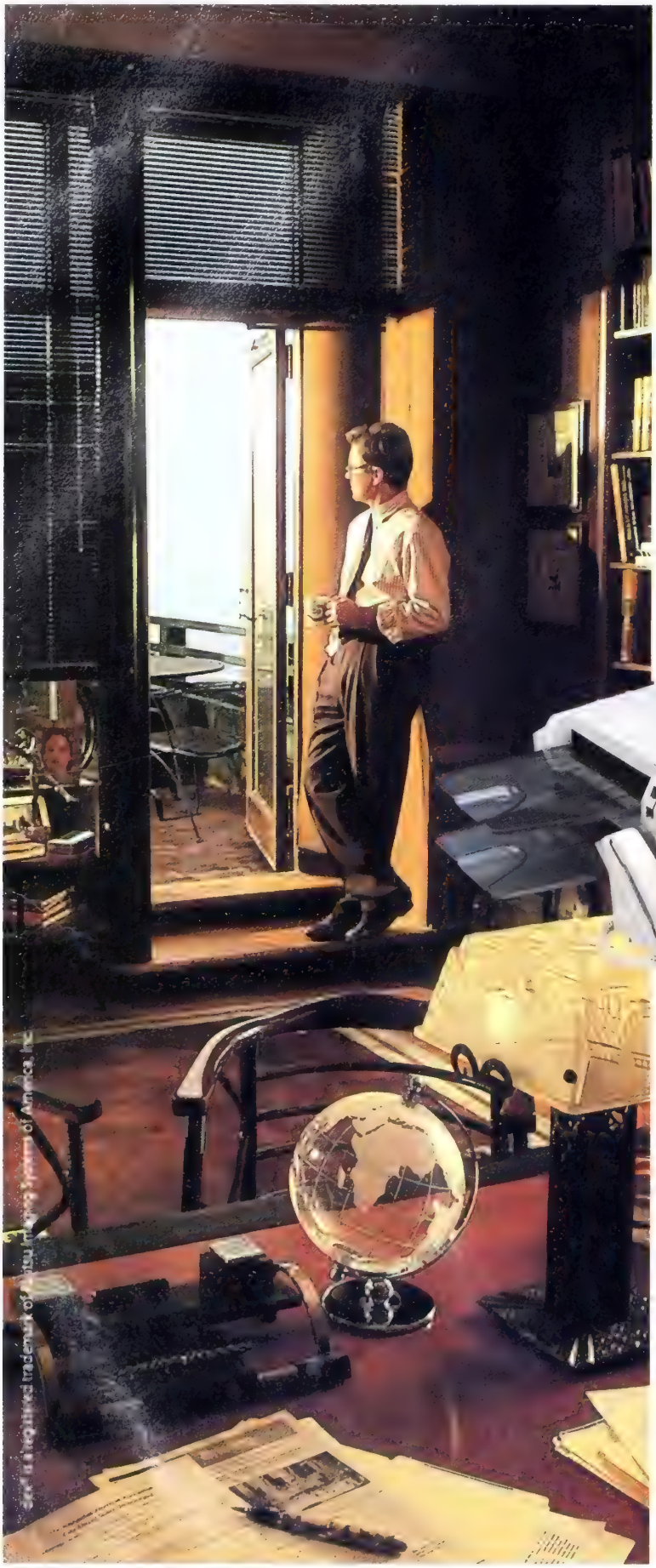

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FUJITSU

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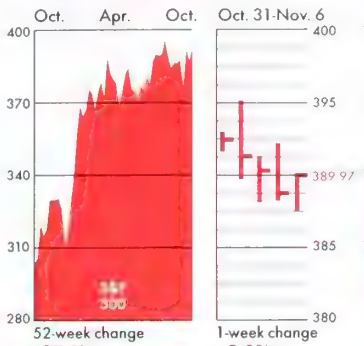
vestment Figures of the Week

ITARY

r confidence plunged, ars of a double-dip reces- Federal Reserve respond- modest cut in the fed , but that wasn't enough vestors' appetites for the efunding. So the central gain—this time, bringing nt rate down a half .5%. Short-term rates suit, but not yields on bonds. The big stocks fell or economic news, but panies continued to ns.

STOCKS



52-week change
+27.4%

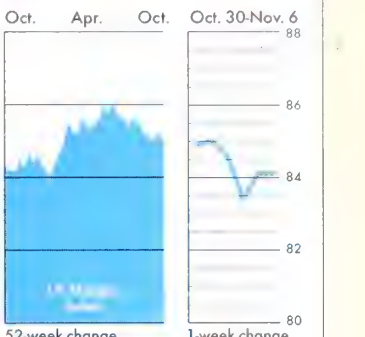
1-week change
−0.8%

BONDS

52-week change
+6.8%

1-week change
−0.9%

THE DOLLAR



52-week change
+4.1%

1-week change
−0.9%

KET ANALYSIS

OCKS	Latest	% change Week	% change 52-week
ES INDUSTRIALS	3038.5	−1.1	24.5
ANIES (Russell 1000)	205.6	−0.7	30.1
MPANIES (Russell 2000)	184.4	0.6	53.2
ANIES (Russell 3000)	218.9	−0.6	31.3

N STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
(FINANCIAL TIMES 100)	2534.2	−1.7	23.1
IKKEI INDEX)	24,750.2	−0.9	5.3
(TSE COMPOSITE)	3531.1	1.0	15.0

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.74%	4.96%	7.4%
30-YEAR TREASURY BOND YIELD	8.01%	7.90%	8.8%
S&P 500 DIVIDEND YIELD	3.16%	3.14%	4.0%
S&P 500 PRICE/EARNINGS RATIO	21.6	21.6	13.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	383.7	383.3	Positive
Stocks above 26-week moving average	52.6%	52.5%	Negative
Speculative sentiment: Put/call ratio	0.40	0.45	Neutral
Insider sentiment: Vickers sell/buy ratio	2.75	2.79	Negative

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

EEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
	12.7	118.3	HASBRO	16.5	160.4	34 1/2
MARKET AUTO PARTS	11.8	77.4	GOODYEAR TIRE & RUBBER	23.6	250.8	51 3/4
RAGE FIRMS	10.8	144.9	PAINEWEBBER GROUP	24.4	160.4	31 1/4
SURANCE	10.4	49.2	JEFFERSON PILOT	14.7	61.4	56 1/2
OADS	10.0	63.1	SANTA FE PACIFIC	20.0	−7.2	11 1/4
EEK LAGGARDS	% change 4-week	% change 52-week	Weakest stock in group	% change 4-week	% change 52-week	Price
OBILES	−11.0	−5.1	FORD MOTOR	−15.3	−2.3	26 1/4
NAL LOANS	−9.0	80.2	HOUSEHOLD INTERNATIONAL	−13.9	104.3	48
MENT STORES	−8.6	38.7	NORDSTROM	−15.4	83.3	35 3/4
STATE INVESTMENT TRUSTS	−7.8	−5.9	LOMAS & NETTLETON MORTGAGE	−14.3	−40.0	1 1/2
NE TOOLS	−7.6	2.8	CINCINNATI MILACRON	−11.5	−6.8	8 5/8

UAL FUNDS

MORNINGSTAR INC.

S total return	%
Y STRATEGIES	17.4
MAN OCEANOGRAPHIC TECHNOLOGY	12.6
HEIMER GLOBAL BIO-TECH	12.2

otal return	%
HEIMER GLOBAL BIO-TECH	152.3
VEIS EMERGING GROWTH	108.1
CIAL STRATEGIC HEALTH SCIENCES	107.3

LAGGARDS

Four-week total return	%
AFUTURE	−4.7
G. T. EUROPE GROWTH	−3.2
MERRILL LYNCH PACIFIC B	−3.1

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−16.2
STRATEGIC INVESTMENTS	−15.4
USF&G EUROPEAN EMERGING COMPANIES	−13.8

TIVE PORTFOLIOS

DATA RESOURCES INC.

mounts
nt the present
$10,000
one year ago
portfolio
ges indicate
total returns

U. S. stocks	Treasury bonds	Foreign stocks	Money market fund	Gold
$12,672	$11,694	$11,640	$10,551	$9,444
−0.71%	−1.22%	+2.22%	+0.10%	−0.70%

this page are as of market close Wednesday, Nov. 6, 1991, unless otherwise indicated. oups include S&P 500 companies only; performance and share prices are as of market close Nov. 5. Mutual fund returns are as of Nov. 1. Relative portfolios are valued as of Nov. 5. A more detailed explanation of this page is available on request.

HOW TO LIGHT A FIRE UNDER THE ECONOMY

This recovery is stagnant. And if consumers hole up for the winter, the economy will be headed for a second dip as well.

The stall in the manufacturing sector, which had been counted on to get us moving, is an almost certain sign that garden-variety antirecession measures are not enough (page 36). This has at least three specific policy implications.

The first is that a standard Federal Reserve Board easing will not work. Fed funds rates have been cut 13 times since mid-1990, and the discount rate five times. Fed funds are trading at 4.75%, and the discount rate is at 4.5%, an 18-year low. This may make the governors of the Fed and Chairman Alan Greenspan feel they are doing their job, but the fact is that this standard version of monetary ease is not enough. That's because the banking system is in a crisis. Ordinarily, a 4.75% fed-funds rate means a prime of 6.25%, but even after the most recent cut the prime is at 7.5%. That means that the Fed must do more to lower the rates at which real businesses borrow money. One possibility: pay interest on bank reserves. Another is to bring these key interest rates down even further. The Fed has to do what is necessary to make the money supply grow faster.

The second policy implication is that tax cuts won't work. Consumers have a voracious appetite for imported goods, which is why tax cuts that boost consumer spending largely on imports provide no lasting benefits. That is true for deficit-neutral tax cuts, such as middle-class tax relief, which don't provide much stimulus, anyway.

Third, the structural nature of this stall may require even stronger medicine than Fed easing can provide. If so, a sweeping program of public investment to rebuild the nation's crumbling infrastructure is a better choice than lower taxes. Yes, it could be a budget-buster, but the money would be spent in the U. S. Carefully structured, the dollars would end up in the private sector, generating jobs and incomes. Public investment yields benefits for the long term as well as for the short term. Studies show a clear link between an economy's infrastructure spending and its productivity, an area in which the U. S. is sadly lacking.

WHAT DOES 'MADE IN AMERICA' MEAN?

There is a shadow hanging over the three-way talks now under way to fashion a North American free-trade zone.

The U. S. faces the possibility that foreign companies will exploit Mexico's low wages and lax environmental enforcement by merely assembling cars, television sets, and the like from foreign parts, and then ship them—duty-free—into the U. S. The answer to the problem, say American trade negotiators, is to require that 60% of the actual manufacturing work be done in Mexico in order for the good to qualify for duty-free shipment north.

But a recent U. S. Customs Service audit of Honda M Co.'s transplant operations in the U. S. and Canada sh there is little agreement, even within the Administratio how to interpret "rules of origin." Worse, the audi Honda—the first by U. S. tax collectors of a foreign company that makes use of the preferential trade t ment accorded Canada—has taken two years and is stall confusion and bureaucratic recriminations (page 108).

It's no help that the U. S. Treasury Dept., which over Customs, has yet to issue final regulations governing rul origin, although they are a critical element of the ne three-year-old U. S.-Canadian Free Trade Agreem Treasury hopes to fix some of the inconsistencies in the panded trade talks that include Mexico. But the ambit North American talks aren't going to wait for the s rules-writers at Treasury—talks are proceeding with rul origin one of the major negotiating issues. If members of Bush Administration can't agree among themselves exa what constitutes "Made in America," how can Washingt negotiators represent their country's interests effectiv Or at all?

UNCHAIN THE BANKS, AND SAVE TAXPAYERS MONEY

Some legislation should never see the light of The best recent example: The bank "reform" sented to the House by Representatives John Dingell (D-Mich.) and Henry B. Gonzalez (D-Tex.). Under guise of expanding banks' ability to offer financial servi the Dingell-Gonzalez bill twisted the Administration's erally well-conceived bank reform into a protective shield the securities and insurance industries. The bill actu curtailed such low-risk, long-standing bank activities as derwriting municipal bonds, offering discount broker and selling insurance where allowed by state laws. bill deserved the 324-89 stomping it received from House.

Unfortunately, the play-acting has all but doomed chances for real reform in banking (page 122). With Federal Deposit Insurance Corp. teetering on the edge o solvency, Congress must approve a $30 billion loan for Bank Insurance Fund before members go home Thanksgiving. Banks will then face the worst of both wor They will pay higher premiums and suffer stricter regula as the terms for the Treasury Dept.'s loan, but they'll barred from the new territories and services they nee boost their profitability.

The profits of healthy banks are all that stand between day's troubled banks and taxpayer's pockets. BUSINESS W has long argued that if closely supervised, banks sho be free to compete in a vast marketplace of financial s vices. Today, that's more than a sound principle; it's economic necessity. President Bush should bring his bank form plan back next year. Thorough reform is the c way to avoid an S&L-style taxpayer bailout of the bank

November 25

THE CORPORATE ELITE

Chief Executives of the BusinessWeek 1000

BusinessWeek

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TOUGH TIMES, TOUGH BOSSES

The New Breed of CEO in Corporate America

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NUMBER 3241

BusinessWeek

NOVEMBER 25, 19

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THE AXMAN COMETH: LIKE OTHERS IN THE CEO CLASS OF '91, OXY PETE'S RAY IRANI HASN'T FLINCHED AT CUTTING JOBS BY THE THOUSANDS

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As profits continue to dive, many boards of directors are taking a hard look at the occupant of the corner office. Obviously, the person who helped create the mess won't easily take to the idea of selling off cherished assets and throwing thousands of people out into the streets. But it must be done. So Corporate America is calling in a new, cold-eyed breed of CEO

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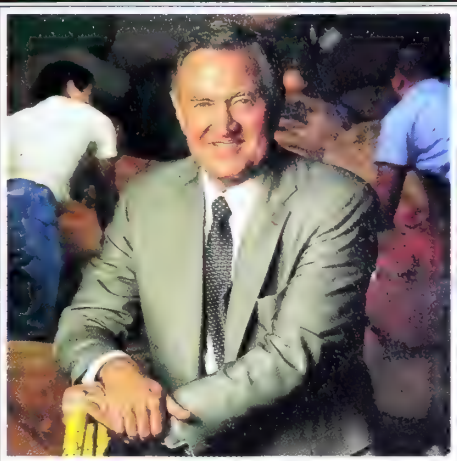

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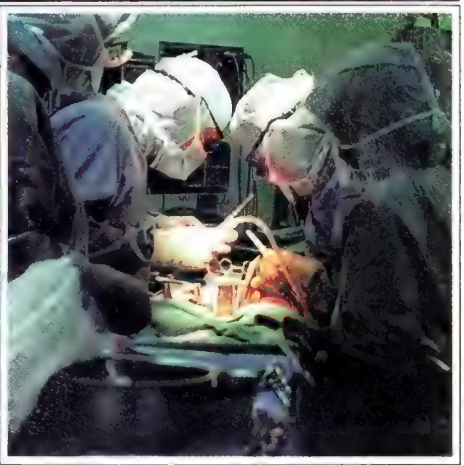

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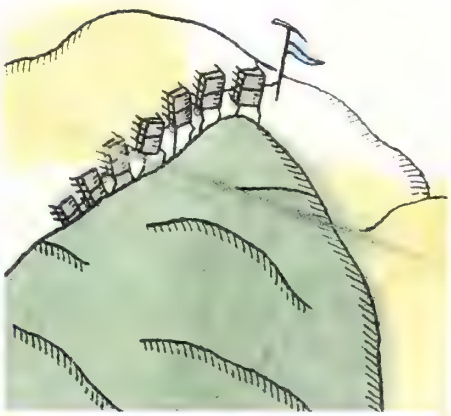

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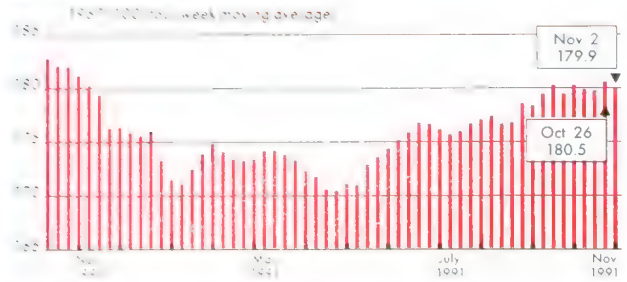
BusinessWeek Index

PRODUCTION

Change from last week: 2.3
Change from year ago: −2.7

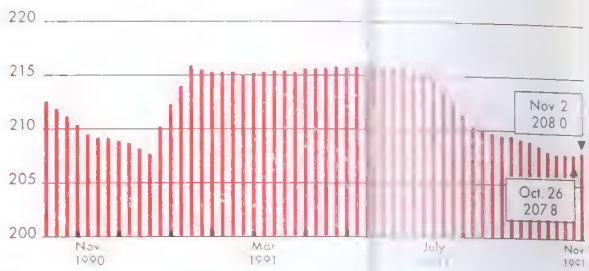


The production index headed lower during the week ended Nov. 2. Seasonally adjusted output levels of trucks, coal, paperboard, paper, and rail-freight traffic were down. Steel, truck, and lumber production increased, while electric power and crude-oil refining output were flat from the previous week. Before calculation of the four-week moving average, the index dropped to 177.6, from 181 in the previous week. For the month of October, the index rose to 179.9, from 179.3 in September

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: 0.1%
Change from last year: −1.1%



The leading index increased during the week ended Nov. 2. Higher stock prices and lower bond yields offset the negative indicators: deteriorating materials prices, increased business failures, and slower growth in M2. The growth rate for real estate loans was virtually flat. Before calculation of the four-week moving average, the weekly index was unchanged at 207.9. For the month of October, the index stood at 207.9, down from 208.4 in September.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/9) thous. of net tons	1,753	1,795#	−7.1
AUTOS (11/9) units	124,371	125,924r#	14.4
TRUCKS (11/9) units	82,441	90,509r#	52.0
ELECTRIC POWER (11/9) millions of kilowatt-hours	56,634	53,059#	8.7
CRUDE-OIL REFINING (11/9) thous. of bbl./day	12,624	12,774#	0.6
COAL (11/2) thous. of net tons	19,327#	20,361	−9.4
PAPERBOARD (11/2) thous. of tons	790.6#	797.3r	3.1
PAPER (11/2) thous. of tons	770.0#	779.0r	−2.4
LUMBER (11/2) millions of ft.	495.2#	498.1	18.8
RAIL FREIGHT (11/2) billions of ton-miles	20.5#	21.8	−4.2

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (11/8) S&P 500	[illegible]	392.55	25.9
CORPORATE BOND YIELD, Aaa (11/8)	8.55%	8.58%	−8.8
INDUSTRIAL MATERIALS PRICES (11/8)	95.5	95.6	−7.8
BUSINESS FAILURES (11/1)	400	389	30.3
REAL ESTATE LOANS (10/30) billions	396.1	$396.0r	2.6
MONEY SUPPLY, M2 (10/28) billions	$404.9	$3,409.7r	2.5
INITIAL CLAIMS, UNEMPLOYMENT (10/26) thous.	420	406r	−5.2

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve Bd., Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans.

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (11/13)	130	130	130
GERMAN MARK (11/13)	1.63	1.64	1.48
BRITISH POUND (11/13)	1.77	1.77	1.96
FRENCH FRANC (11/13)	5.59	5.61	4.99
CANADIAN DOLLAR (11/13)	1.13	1.12	1.16
SWISS FRANC (11/13)	1.45	1.45	1.25
MEXICAN PESO (11/13)	3,059	3,060	2,927

Sources: [illegible] Currencies expressed in units per U. S. dollar, except for British [illegible]

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
BUSINESS WEEK PRODUCTION INDEX (Oct.)	179.9	179.3r	−1.1
BUSINESS WEEK LEADING INDEX (Oct.)	[illegible]	208.4r	−1.4
PRODUCER PRICE INDEX (Oct.) finished goods	122.3	121.5	0.0
PURCHASING MANAGERS' INDEX (Oct.)	53.5%	55.0%	22.7

Sources: BW, CIBCR, BLS, National Association of Purchasing Management

PRICES

	Latest week	Week ago	% Change year ago
GOLD [illegible]	356.550	354.500	−7.1
STEEL SCRAP [illegible]	94.00	94.00	−12.6
FOODSTUFFS (11/11) index, 1967=100	204.6	205.6	−2.4
COPPER [illegible]	111.1	111.6	−6.3
ALUMINUM [illegible]	53.4	53.5	−28.3
[illegible]	3.74	3.78	31.2
COTTON (11/9) strict low middling 1 1/16 in., ¢/lb	55.20	57.16	−20.2

[illegible] Metals Week, London market, Commodity Research Bureau, Metals Week market, Memphis market

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (10/28)	[illegible]	$882.8r	7.8
BANKS' BUSINESS LOANS (10/30)	295.6	[illegible]	−9.4
FREE RESERVES (10/30)	947r	[illegible]	239.4
NONFINANCIAL COMMERCIAL PAPER (10/30)	133.1	134.6	−13.4

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for a two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (11/12)	[illegible]	5.06%	7.94%
PRIME (11/13)	[illegible]	7.50	10.00
COMMERCIAL PAPER 3-MONTH (11/12)	5.02	5.06	7.88
CERTIFICATES OF DEPOSIT 3-MONTH (11/13)	5.03	4.98	7.95
EURODOLLAR 3-MONTH (11/9)	5.01	5.25	[illegible]

Sources: Federal Reserve Board, First Boston

The production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include [illegible] machinery and defense equipment. [illegible] Southern Forest Products Assn. 3—Free-market value NA—Not available r—revised NM—Not meaningful

[illegible]

Ever Get The Feeling You're Paying For More Protection Than You Need?

That's what happened to many of t Pest Control Operato of California.

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They c e to us for a solution.

Alon with their insurance broker, w olled up our sleeves, studied th industry and iden-tified the differences within the pest c trol business. We then built tailored coverages, services and rates to fit their specific needs.

Are they saving money? A lot. Plus we showed them how to avoid risks and minimize accident costs, which led to a substantial refund on their pre-miums at the end of the year. And now we're working as a team on their workers compen-sation insurance, too.

This is just one example of how our customer-focused property/liability and workers compensation plans are help-ing to control insurance costs.

For more examples, call your independent agent or broker, or our CEO, Bob Puccinelli, directly at (415) 627-5331.

Because if you're not careful, you could be paying for risks you're not even taking.

Industrial Indemnity

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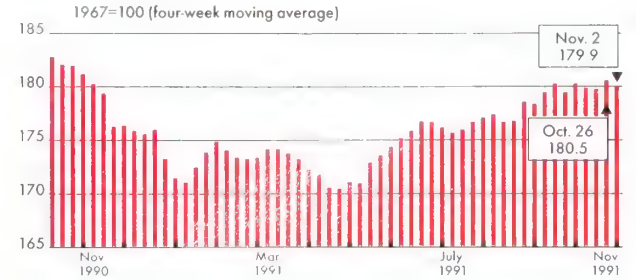
BusinessWeek Index

PRODUCTION

Change from last week: −0.3%
Change from last year: −0.7%

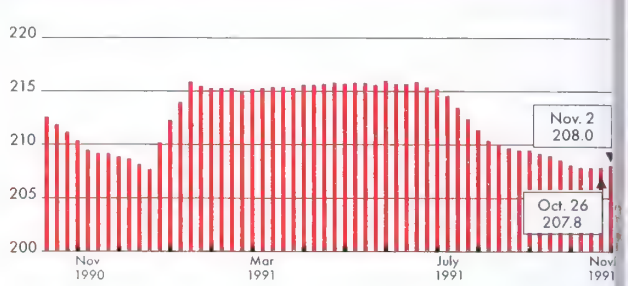


The production index headed lower during the week ended Nov. 2. Seasonally adjusted output levels of trucks, coal, paperboard, paper, and rail-freight traffic were down. Steel, truck, and lumber production increased, while electric power and crude-oil refining output were flat from the previous week. Before calculation of the four-week moving average, the index dropped to 177.6, from 181 in the previous week. For the month of October, the index rose to 179.9, from 179.3 in September.

BW production index copyright 1991 by McGraw Hill Inc

LEADING

Change from last week: 0.1%
Change from last year: −1.1%



The leading index increased during the week ended Nov. 2. Higher stock prices and lower bond yields offset the negative indicators: deteriorating materials prices, increased business failures, and slower growth in M2. The growth rate for real estate loans was virtually flat. Before calculation of the four-week moving average, the weekly index was unchanged at 207.9. For the month of October, the index stood at 207.9, down from 208.4 in September.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/9) thous. of net tons	1,753	1,795#	−7.1
AUTOS (11/9) units	124,371	125,924r#	14.4
TRUCKS (11/9) units	82,441	90,509r#	52.0
ELECTRIC POWER (11/9) millions of kilowatt-hours	56,634	53,059#	8.7
CRUDE-OIL REFINING (11/9) thous. of bbl./day	12,624	12,774#	0.6
COAL (11/2) thous. of net tons	19,327#	20,361	−9.4
PAPERBOARD (11/2) thous. of tons	790.6#	797.3r	3.1
PAPER (11/2) thous. of tons	770.0#	779.0r	−2.4
LUMBER (11/2) millions of ft.	495.2#	498.1	18.8
RAIL FREIGHT (11/2) billions of ton-miles	20.5#	21.8	−4.2

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (11/13)	130	130	130
GERMAN MARK (11/13)	1.63	1.64	1.48
BRITISH POUND (11/13)	1.77	1.77	1.96
FRENCH FRANC (11/13)	5.59	5.61	4.99
CANADIAN DOLLAR (11/13)	1.13	1.12	1.16
SWISS FRANC (11/13)	1.45	1.45	1.25
MEXICAN PESO (11/13)[3]	3,059	3,060	2,927

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (11/13) $/troy oz.	356.550	354.500	−7.1
STEEL SCRAP (11/12) #1 heavy, $/ton	94.00	94.00	−12.6
FOODSTUFFS (11/11) index, 1967=100	204.6	205.6	−2.4
COPPER (11/9) ¢/lb.	111.1	111.6	−6.3
ALUMINUM (11/9) ¢/lb	53.4	53.5	−28.3
WHEAT (11/9) #2 hard, $/bu	3.74	3.78	31.2
COTTON (11/9) strict low middling 1-1/16 in., ¢/lb.	55.20	57.16	−20.2

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market.

LEADING INDICATORS

	Latest week	Week ago	% Chang year ag
STOCK PRICES (11/8) S&P 500	391.11	392.55	25.
CORPORATE BOND YIELD, Aaa (11/8)	8.55%	8.58%	−8.
INDUSTRIAL MATERIALS PRICES (11/8)	95.5	95.6	−7.
BUSINESS FAILURES (11/1)	400	389	30.
REAL ESTATE LOANS (10/30) billions	$396.1	$396.0r	2.
MONEY SUPPLY, M2 (10/28) billions	$3,404.9	$3,409.7r	2.
INITIAL CLAIMS, UNEMPLOYMENT (10/26) thous.	420	406r	−5.

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Chang year ag
BUSINESS WEEK PRODUCTION INDEX (Oct.)	179.9	179.3r	−1.
BUSINESS WEEK LEADING INDEX (Oct.)	207.9	208.4r	−1.
PRODUCER PRICE INDEX (Oct.) finished goods	122.3	121.5	0.
PURCHASING MANAGERS' INDEX (Oct.)	53.5%	55.0%	22.

Sources: BW, CIBCR, BLS, National Association of Purchasing Management

MONETARY INDICATORS

	Latest week	Week ago	% Chang year ag
MONEY SUPPLY, M1 (10/28)	$883.8	$882.8r	7.
BANKS' BUSINESS LOANS (10/30)	295.6	296.6r	−9.
FREE RESERVES (10/30)	947r	744r	239.
NONFINANCIAL COMMERCIAL PAPER (10/30)	133.1	134.6	−13.

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for a two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Yea ag
FEDERAL FUNDS (11/12)	4.89%	5.06%	7.94%
PRIME (11/13)	7.50	7.50	10.00
COMMERCIAL PAPER 3-MONTH (11/12)	5.02	5.06	7.88
CERTIFICATES OF DEPOSIT 3-MONTH (11/13)	5.03	4.98	7.95
EURODOLLAR 3-MONTH (11/9)	5.01	5.25	7.99

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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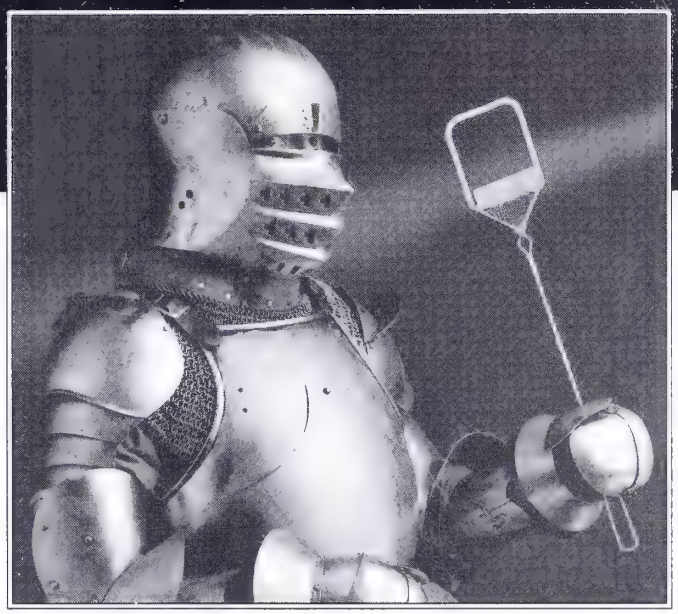

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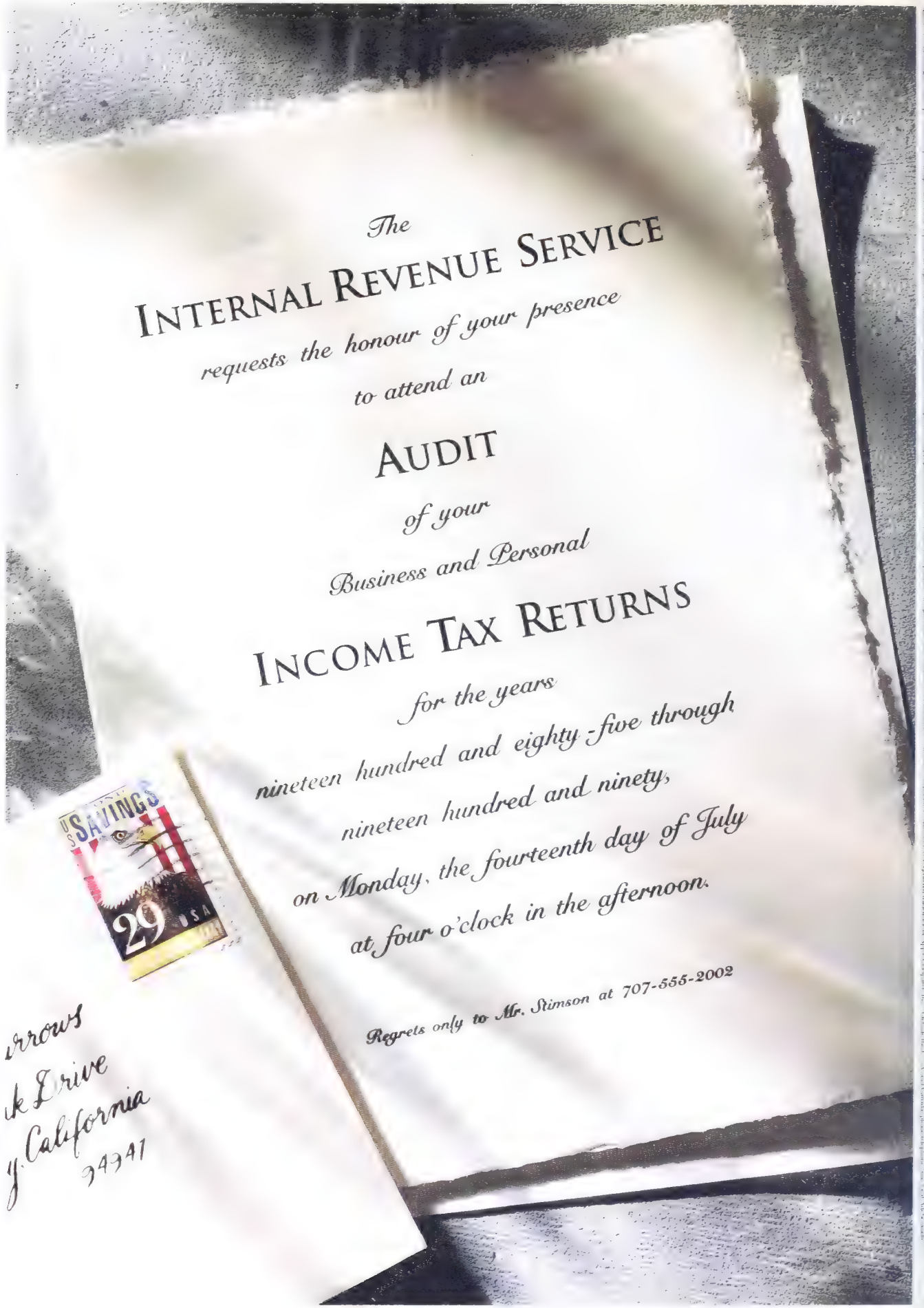
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BAD NEWS

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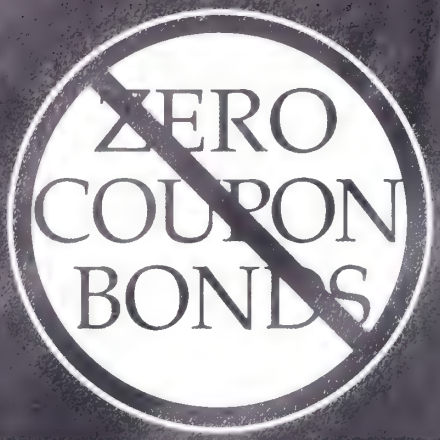

ZERO COUPON BONDS

The Wrong Choice for College Savers

By Peter A. Roberts, Chairman, College Savings Bank

From parents to educators to legislators, everyone is concerned about the ever-rising cost of college and how families will be able to pay future costs. But let's not jump to conclusions. Just because some states and brokerage firms offer zero-coupon bonds to fund a college education doesn't mean zeros are the right choice.*

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Therefore, if your broker urges you to buy zeros to fund your child's college education, just say "NO!"

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Many individuals as well as college and university administrators have found a way to meet the rising cost of college with the ***CollegeSure***® Certificate of Deposit (CD).

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Peter A. Roberts is a known expert in the saving-for-college marketplace. He has provided testimony on college costs and tax incentives to save before the U.S. Senate Finance Committee, the U.S. House Ways and Means Committee and other governmental bodies. He played a leading role on Wall Street in the development of the zero-coupon bond and he is the inventor of the CollegeSure® CD, America's first commercially available and nationally marketed college cost prepayment product.

Peter A. Roberts testifying before the U.S. Senate Finance Committee, July 31, 1991.

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Readers Report

WORKERS HAVE TO 'BUILD THEIR OWN SAFETY NETS'

Congratulations on "I'm worried about my job!" (Cover Story, Oct. 7) and "When the bonds of loyalty are broken" (Editorials, Oct. 7), stressing the importance of developing skills and adaptability in today's economy. It is certainly true that global competition and technological change have developed a new economic reality for American workers. As you say, the corporate survivors are those who broaden their skill bases and contacts and build their own safety nets. This is as true for rank-and-file working people as it is for managers and executives. We in the Labor Dept. have been preaching this gospel.

The days when job security could be guaranteed by a company, a union, or even government are largely over. Today, job security can only be achieved when workers have the willingness and the opportunity to learn and are not discouraged from moving from job to job and career to career. You cited the importance of making pensions portable as a key step in meeting the new challenges. You are right; that is why the Administration's POWER proposal is designed to provide retirement security for more working men and women, and to make pensions more portable.

Whether the challenge is for employers to shift from guaranteeing employment to guaranteeing employability or for business, labor, and government to lead a workplace revolution focused on a '90s agenda for job security, all of us must recognize that our people are the critical element in America's ability to be competitive in global competition.

Lynn Martin
Secretary of Labor
Labor Dept.
Washington

THIS INVESTMENT TAX CREDIT DOESN'T PICK WINNERS

In your article "Suddenly, everyone wants to cut taxes" (Top of the News, Nov. 4), you refer to some of my proposals to stimulate investment as requiring government to pick winners and losers. That is not the case—my suggestion to enact an incremental investment tax credit would simply provide for an investment credit only on new investment above a base line.

This would prevent giving revenues away for investments that likely would have been made anyway. Other than to confine the credit to machinery and equipment, I have imposed no limitations on which types of equipment, or on which industries, can be eligible for the credit.

Lawrence Chimerine
President
Radnor Consulting Services
Wayne, Pa.

KUWAIT IS NO DEADBEAT

In Capital Wrapup (Washington Outlook, Oct. 28), under "Desert Storm," you incorrectly reported that Kuwait was an "offender" in not paying its contributions to the U. S. and that the Administration feared pressing too hard. The U. S. and Kuwait agreed on a schedule of payments that recognized that Kuwait has had almost no revenue from oil in over a year and yet has had enormous reconstruction costs. Kuwait has met every payment as promised, and its entire pledge will be paid in December.

Edward W. Gnehm Jr.
U. S. Ambassador to Kuwait
Kuwait City

FEAR OF LENDING: A BANKER'S RATIONALE

In response to your commentary "Bashing the regulators won't get loans flowing," (Top of The News, Oct. 14), I would like to say: "Oh, yes, it will!"

Amid talks of easing banking capital requirements, I would like to give a banker's viewpoint. The facts are these: Banks aren't lending money because they are either too weak and lack the capital base to support new loans or they are afraid to make a loan that next week will be written off because of tougher regulations. On these lines, we should not lower capital ratios. Strong capital bases make good sense. Even

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eaders Report

ORRECTIONS & CLARIFICATIONS

"A mounting arsenal against mi-
ines" (Personal Business, Oct. 14),
referred to the Baylor College of
dicine as a unit of Baylor Universi-
The institutions are not affiliated.

'Dueling pioneers" (The Quality Im-
ative, Bonus Issue, Oct. 25), we
ntified W. Edwards Deming as a
fessor at Columbia University.
ile Deming lectures at Columbia,
principal academic appointment is
New York University's Leonard N.
rn School of Business, where he has
n an emeritus member of the facul-
since 1976.

e important, strong banks already
the new requirements. Lowering
irements would just let weak banks
into more trouble. The real problem
in the classification of the secondary
ce of repayment. For example, a
that has a "performing" real es-
loan, meaning interest and principal
paid current, may be enforced by the
lators to classify the loan as "non-
orming" if the value of the undely-
real estate, the secondary source of
yment, has been reduced during a
praisal.

agree that this loan is less sound
one with sufficient capital, but is it
y "nonperforming"? To bankers,
nperforming" translates into loss re-
es, a lower stock price, lack of cus-
er confidence, and even the loss of
banker's job. The prudent solution is
naintain banks with strong capital
s, but call 'em as we see 'em. If the
is performing, then classify it as
orming!

D. J. D'Auria
San Diego

LTH CARE REFORM: E FOR A SECOND OPINION

s a family physician, I read your
proposal for health care reform
great interest ("A prescription for
rm," Social Issues, Oct. 7). While it
significant merit, I would offer sev-
comments. The estimate that 30% of
is unnecessary may be true, but the
gestion that this is due primarily to
sician greed is not. I work for a non-
it clinic: I'm paid a salary, and there-
I have no incentive to overtreat.
vever, I often find myself ordering
s that aren't medically necessary or
itting patients who could be man-
d outside the hospital because of pa-
t pressure and to protect myself or
emergency room physician from liti-

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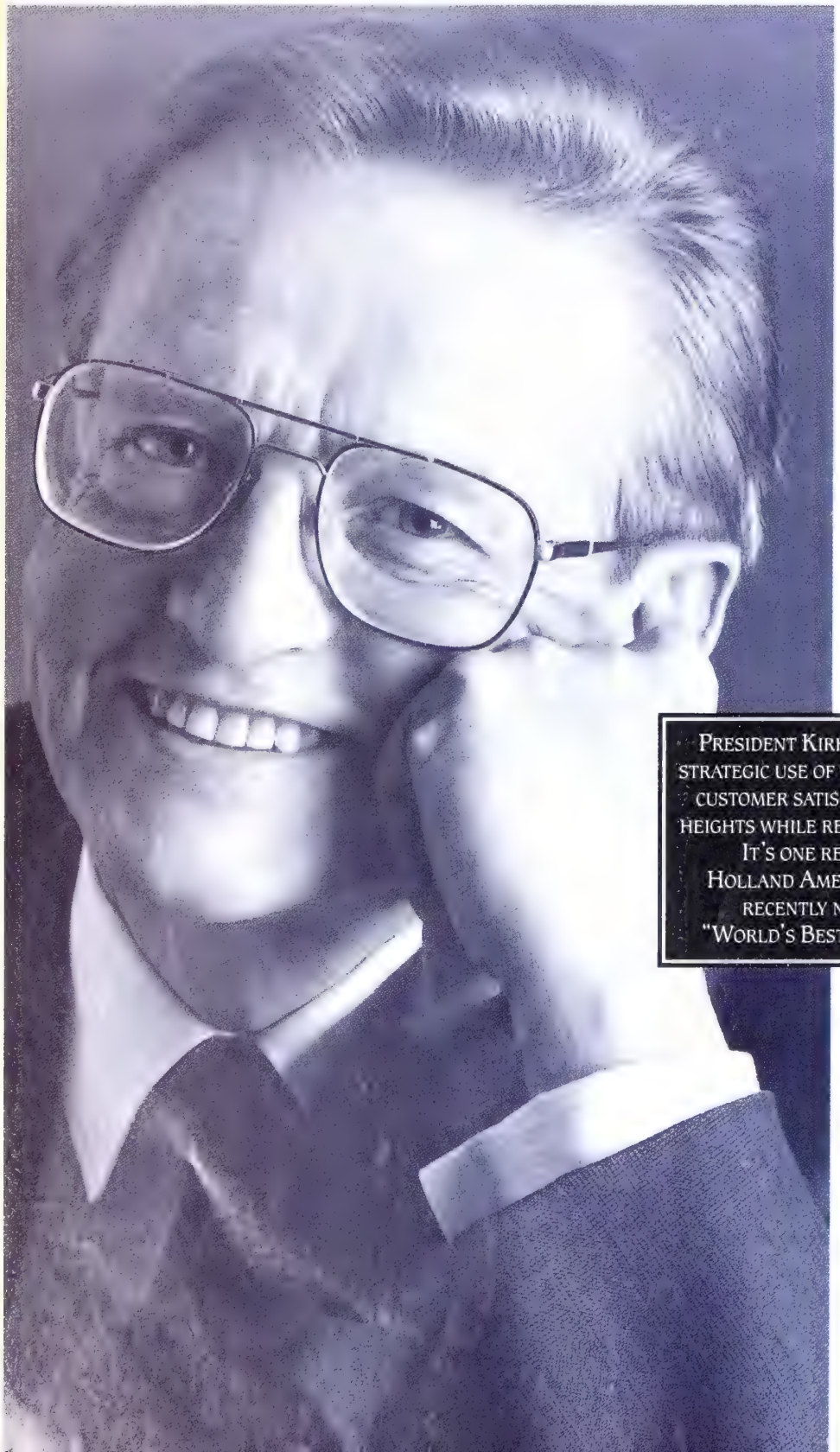

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eaders Report

on. Malpractice reform, with a cap ain and suffering awards and deci- making by an arbitration panel, is lutely necessary for any health care m package.

addition, you mention that gate- ers will usually be internists. Actu- family physicians are the most ly prized gatekeepers because of specialized training in primary care cine and their ability to see a wide ty of patients.

Mark Ebell, M. D.
Athens, Ga.

our story contains a good many ob- servations and ideas. And I'm sed to see that BUSINESS WEEK is ing specific recommendations. How- the funding proposal is absurd. It conscionable, in my mind, to recom- d further complicating the already mless U. S. tax code. Additional loyer classification schemes, sur- ges, and tax credits are not accept- With the exception of the progres- characteristic, social policy should eparate from tax policy. Only then we hope to reasonably simplify our systems.

John R. Schuyler
Aurora, Colo.

anaged care is why we have 30 million people not covered by medi- care, millions more that have mini- n care, and why insurance companies le up a quarter of the health care rs. Back to the drawing board. The you designed is so full of holes it s like Swiss cheese.

Howard Steinbach
Banks, Ore.

McREWARDS PROBABLY DON'T WEIGH THE McRISKS

our article "McRisky" (Cover Story, Oct. 21) would have been more apt- tled "McMarketing." If one makes questionable assumption that Mc- ald's can overcome the significant rational problems of making a 180- ee turn from standardization to cus- ization, it will find itself wading ugh a radical shift in terms of its keting strategy.

he essence of McDonald's marketing lenge over the next few years will ffective positioning. McDonald's, like y other fast-food operations, has e the invalid assumption that posi- ing is what you do to a product. Posi- ing is what you do to the mind of the sumer in terms of perceptions and ges. Mickey D's has had some suc- at objective positioning, i.e., posi- ing itself according to physical attri-

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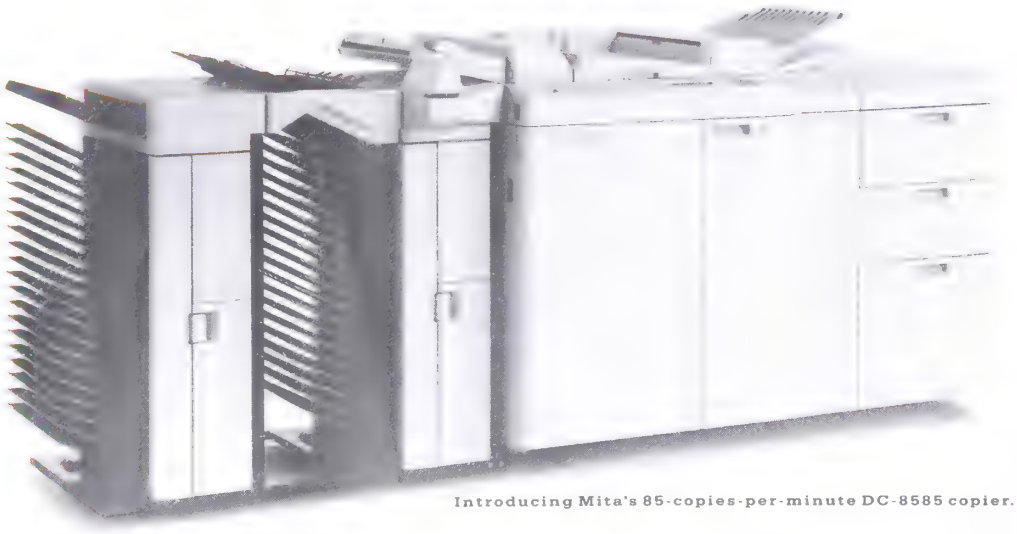

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eaders Report

es of features such as its Big Mac, venient locations, and right color eme. [But] they have forgotten a ba- marketing fundamental—no compa- sells products. What a company sells ne benefits that those products deliv- For example, McDonald's does not hamburgers, pizzas, or salad. What ells is convenience, price/value, vari- and health. The organization's mar- ng strategy needs to reflect this.

Simon Crawford-Welch
Professor of Hospitality, Marketing & Research
University of Nevada
Las Vegas

y concern is that McDonald's try- ing a little bit of this and a little of that will cause it to lose its image. s in addition to endangering its re- ned efficiency and its store-to-store sistency.

William S. Birnbaum
Costa Mesa, Calif.

ecently, I placed an order at McDon- ald's and watched the front-line em- ees run into each other like the Key- e Kops as each attempted to fill the er he or she had taken. Then, when I ived my food—a burger, fries, and k—the total came to nearly $5. ait," I thought to myself, "this is posed to be McDonald's." Rivals as Taco Bell and Wendy's are er, cleaner, and offer better val- —and service can be faster since a le employee handles the transaction le others fill the order.

Ted Janusz
Gibsonia, Pa.

cDonald's must be careful not to make one of the most common takes seen in companies where wth has flattened: throwing away basic business to gamble on new ducts and new ventures.

lthough it is frequently tried by com- ies with flattening growth, it often omes a "new products/new ventures se." During such a phase, the compa- experiments with many new areas, er really understanding what it takes succeed. Eventually, after losing e sums of money on new ventures, company goes back to its basic busi- s—hopefully before the basic busi- s deteriorates.

Phyllis Ezop
La Grange Park, Ill.

ers to the Editor should be sent to Readers ort, Business Week, 1221 Avenue of the Ameri- New York, N. Y. 10020. Fax: (212) 512-4464, : 12-7960, Intl. 4998204. All letters must in- e an address and daytime and evening tele- e numbers. We reserve the right to edit letters larity and space.

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BEAR HUNTING WITH THE POLITBURO: A GRITTY FIRST-HAND ACCOUNT OF RUSSIA'S YOUNG ENTREPRENEURS—AND WHY SOVIET-STYLE CAPITALISM CAN'T WORK
By A. Craig Copetas
Simon & Schuster • 271pp • $22

MOSCOW'S NEW BREED OF FLIMFLAM MAN

Not long ago, Westerners engaged in trade with the Soviet Union followed a well-established pattern. They'd arrive at Moscow's Sheremetyevo Airport, suitcases laden with goodies from Scotch to camcorders. Limousines would whisk them to one of several foreigners' hotels—off-limits to average Soviets, though prostitutes and black marketeers were welcome. The next morning, they would be taken to the wedding-cake tower of the Foreign Trade Ministry, where they'd present their gifts and start bargaining with a tiny corps of Soviet foreign-trade bureaucrats.

All this has changed in the upheaval of the past seven years. Westerners are more, rather than less, at risk when they try to do business in the former Soviet Union, writes A. Craig Copetas in his amusing new book, *Bear Hunting with the Politburo*. That's because the mossbacks of the old trade bureaucracy, though corrupt, operated by an unspoken set of rules. You could depend on them. The new traders are just as corrupt but play by no rules at all.

Rather than opening up opportunities, *perestroika* has replaced the old system with a more dangerous one, writes Copetas, who worked in Moscow from 1987 to 1991 as a correspondent for *Regardie's*. The new business people, who claim to be the vanguard of a market economy, cut their teeth in a Communist system that forced them to pay lip service to whatever lie was tossed their way. It may be a generation or more before the new traders can tell the difference between right and wrong. "Dishonesty, in the Western sense, was common business sense in the Soviet Union," Copetas writes.

Copetas focuses on several young pioneers of the cooperative, or private-business, movement that Mikhail Gorbachev began in 1987. His star example is Volodya Yakovlev, whom he casts as Moscow's entrepreneurial everyman. To believe Copetas, Yakovlev, a 31-year-old child of the Communist bourgeoisie, is as brilliant as he is amoral. "The Yak" left Soviet journalism to create Cooperative Fact, a kind of Yellow Pages service. He followed that with *Commersant*, the first Soviet business newspaper since the revolution.

Copetas, who also worked as an adviser for the Yak, credits his client with a knack for suckering Westerners. Caught up in the glitter and promise of *perestroika*'s early years, a parade of Americans fawned over Yakovlev, inviting him to enroll at Harvard University and providing him with a steady stream of hard currency and computer hardware. When he set up *Commersant*, he quickly acquired a coaching staff of U.S. journalism professors and executives. The venture was bankrolled to the tune of more than $400,000 by Thomas H. Dittmer, chairman of Refco Group Ltd., a Chicago commodity-trading firm. (Copetas gives Dittmer and his firm pseudonyms to protect them from "possible political retribution," but a check of recent news stories readily reveals their identities.)

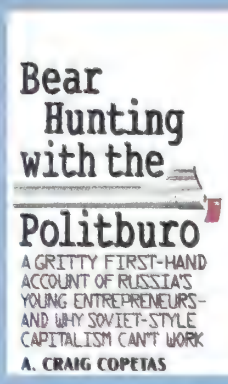
The wily Yakovlev burned nearly everyone. For one thing, he refused to recognize that a contract is a contract. He entered into an exclusive information-marketing agreement with Dittmer, who dutifully propped up *Commersant* with staff, cash, and hardware. Then, after failing to pay many of his American bills, Copetas writes, he violated the deal by entering into a similar arrangement with a French media empire. Copeta never does explain how the conflict w resolved, but Refco still markets *Co mersant* subscriptions in the U.S.

The Yak and others like him have h no trouble finding prey. Many foreig ers doing business in the Soviet Unio especially Americans, are woefully nai and unable to resist the lure of *pere troika*. In Copetas' words: "The Ame can entrepreneurs rushed Moscow lik airborne Oklahoma Sooners, so mar that the Soviet Consulate in Washingto D.C., had to conscript extra embass staff to process the thousands of bus ness visas that arrived at the door wee ly by Federal Express. There were Ca fornia entrepreneurs wanting to sell t Soviets swimming-pool tarpaulins, Tex entrepreneurs pushing bull semen, Flo da entrepreneurs extolling the virtues prefabricated houses, and North Caro na entrepreneurs peddling sod." As M chael Mears, the U.S. Commercial O fice counselor in Mosco during the late 1980s, p it: "Virtually none them knew what the were doing."

Among Copetas' ta gets is the U.S.-U.S.S.R Trade & Economic Cou cil, a secretive trad group made up of man blue-chip American con panies and such heavy hi ters as PepsiCo Inc.' Donald M. Kendall an Dwayne O. Andreas Archer Daniels Midlan Co., the Illinois agribus ness company. Copeta claims that U.S. comp nies received little in e change for up to $14,00 in annual dues. Many got into risk council-backed deals that fell apart i 1987, when Vladimir Sushkov, a deput Soviet Trade Minister and council c chairman, was caught smuggling Jap nese videorecorders. Copetas quotes a American automobile executive: "Th Council cost us over $250,000, and all w ever got out of it was a . . . table nea Gorbachev at a Kremlin dinner."

Copetas' lively anecdotes contain val able lessons for anyone contemplatin doing business in the Soviet Union. Bu I'm troubled by the idea of Copeta working willingly and intimately for Y kovlev, apparently intending all along t write this put-down of *perestroik* Moreover, Copetas' slick writing veer disconcertingly between whimsy an deadeye reporting. Some of his storie seem far-fetched, and his quotes are to uniformly funky to be entirely belie able. Still, since the failed August cou

The young pioneers of Soviet capitalism are as corrupt as the old bureaucrats —and less reliable



ring of self-serving and predictable
ezes has come out of Moscow, even
by Gorbachev himself. In compari-
Bear Hunting with the Politburo,
its bitter view of the new Soviet
marketeers, is fresh and important.
BY PETER GALUSZKA
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nfortunately, Kahn is decidedly un-
cal. A ruckus over Andreas' contri-
ons to the family of a Commodity
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example. And his logrolling for etha-
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s recently told a group of securities
lysts, "is like trying to frisk a seal."
en Kahn gets a grip on his subject,
ermarketer is great reading. Too of-
though, Andreas wriggles away.
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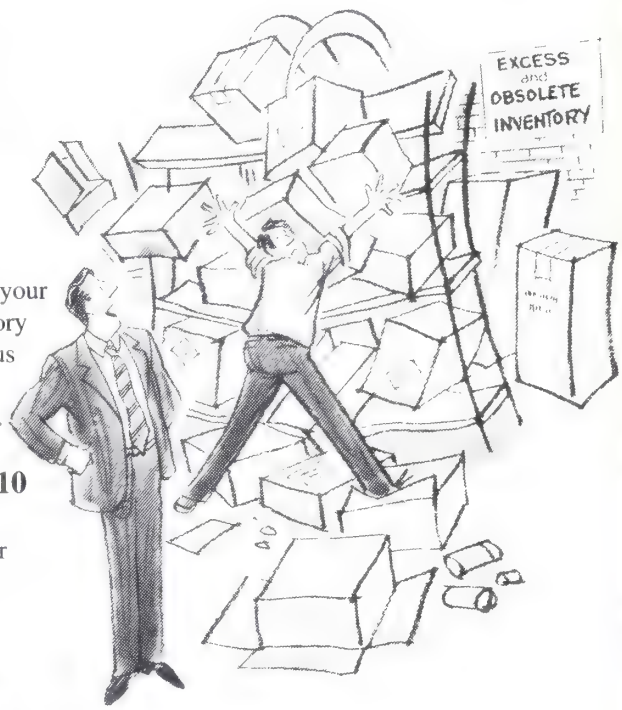

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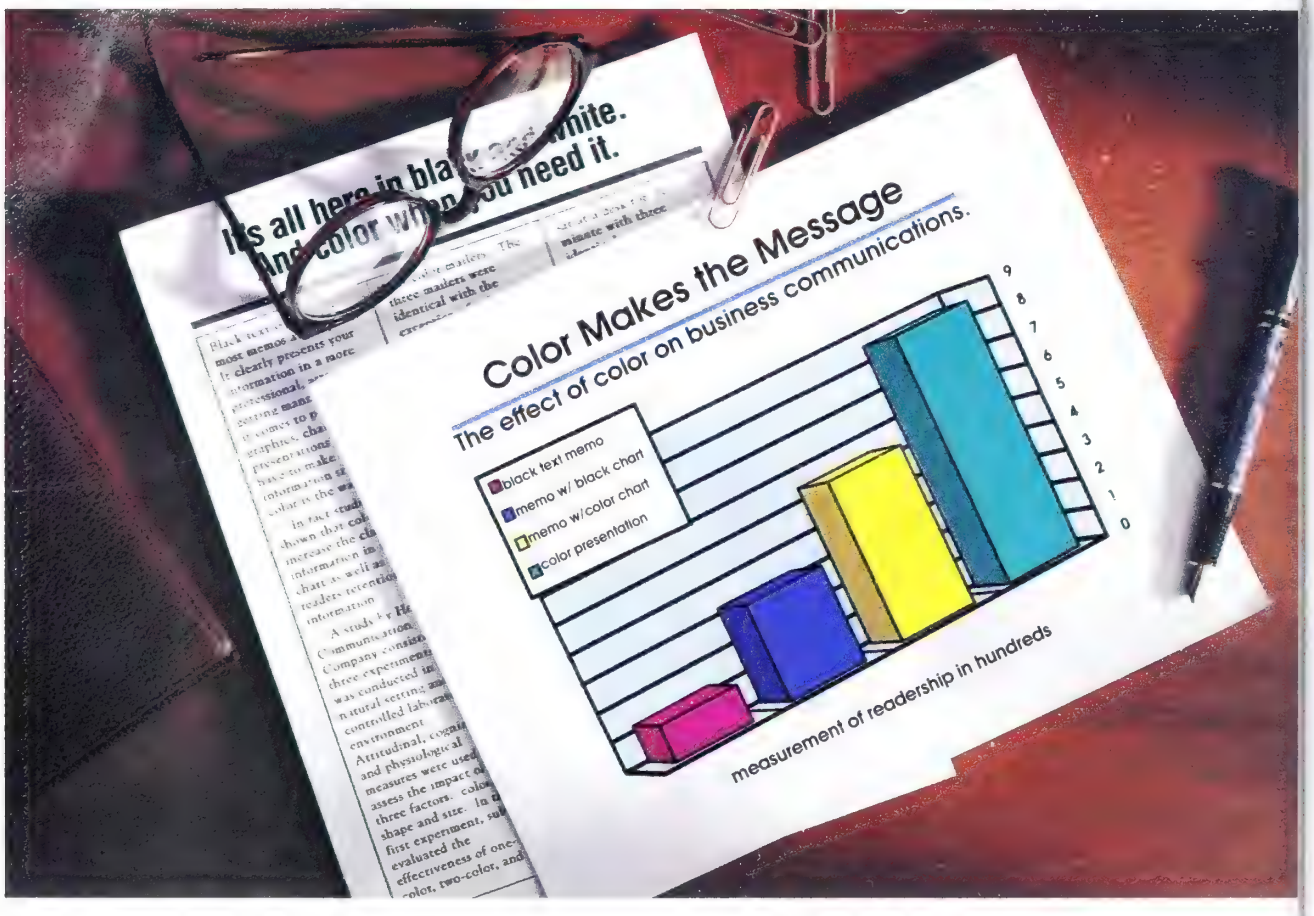

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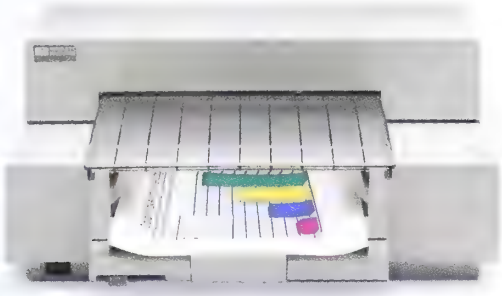

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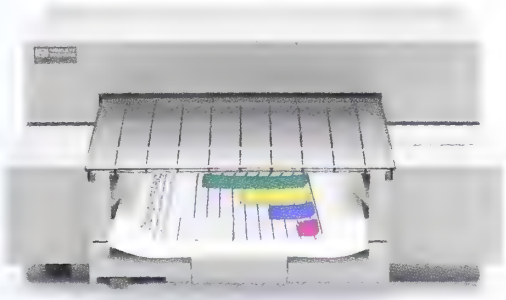

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BY PAUL CRAIG ROBERTS

Political correctness is nothing new: In 1964, Ronald Coase and James Buchanan were victims of a secret plot by a university administration that didn't approve of their politics

PAUL CRAIG ROBERTS IS CHAIRMAN OF THE INSTITUTE FOR POLITICAL ECONOMY IN WASHINGTON

The awarding of the 1991 Nobel Prize in Economics to Ronald H. Coase shows how much economics has changed in the past 30 years. When Coase's famous article, *The Problem of Social Cost*, was published three decades ago, the academic Establishment was unable to find any merit in it—or in the work of Coase's colleagues in the innovative economics department at the University of Virginia, home of the "Virginia School" that subsequently produced two Nobel laureates.

Indeed, in 1964 Coase became the first victim of a secret plot hatched by the university administration to purge the "right-wing" economics department of its leadership, culminating in the resignation in 1968 of James M. Buchanan, winner of the 1986 Nobel Prize. Thus, Thomas Jefferson's academic village, which has never had a Nobel laureate, has the dubious distinction of having expelled two scholars who later won the prize.

The dismantling of the Virginia School shows that there is nothing new about the political correctness that stifles diversity of opinion in today's universities. A confidential 1963 study conducted behind the back of the economics department by a hostile university administration in Charlottesville described the outlook of Coase and Buchanan as "Nineteenth-Century Ultra-Conservatism." With unknowing irony, it accused what was then arguably the most innovative economics department in the world of "doctrinal rigidity" that was "a highly unfortunate handicap in the present race among Universities to build up strong staffs."

NO CACHET. The university administration chose to use promotion, tenure, and salary policy to "lose" crucial members of the economics department and brought in a new dean of faculty to do the job. The members of the Virginia School only learned the reasons for the dismantling of their department a decade later, when the secret report and dean's records fell by chance into the hands of a survivor of the purge.

In his 1968 resignation letter to university President Edgar F. Shannon Jr., who presided over this egregious assault on academic freedom, Buchanan expressed puzzlement at the series of actions that had "broken up a graduate-research-teaching concentration that was unique in social-science scholarship and one that was highly successful by any objective criteria." The editor of the *American Economic Review* had acknowledged the success of the Virginia School with his public statement that Virginia's economics graduate students were submitting more interesting manuscripts than those of any other institution in the country.

Perhaps the Administration's decision to purge the Virginia School originated in 1960-
when Kermit Gordon, then head of the Fo
Foundation's economics program and lat
president of the Brookings Institution, m
with Shannon and members of the depa
ment. He questioned whether the economi
faculty had the liberal cachet to receive Fo
Foundation grants. Gordon took exception to
brochure produced by the economics facul
that expressed a commitment to "a social ord
based on individual liberty." He saw this as
expression of hostility to socialism and freedo
of inquiry.

Gordon was disinclined to support the r
search that would revolutionize economics a
result in the awarding of two Nobel Prize
The reason is not hard to understand. Gord
was in lockstep with the conventional wisdo
of the 1960s, and Professors Coase, Buchana
and their colleagues were not. Indeed, the
were raising fundamental challenges to an ec
nomics that was little more than a ramp f
government intervention, and this did not s
well with those who saw more governme
as the hallmark of progress.

WORLD RECOGNITION. Before Coase, economis
regarded air, water, and noise pollution, for e
ample, as social costs inflicted on society b
the market system. Producers were profitin
by shifting costs to society in genera
Economists believed that only increased go
ernment regulation could rectify these "mark
failures" and prevent capitalism from harm
ing society.

Coase undermined the conventional wisdo
by arguing that social costs result from the a
sence of defined property rights, not from th
failure of markets. The solution was to e
tend the market by defining rights. This wou
reduce "transaction costs" and permit priva
parties to find a solution without governme
intervention—an expensive cost itself—th
could easily result in a net loss to society b
cause of reduced output.

Together with Buchanan, who maintaine
that government fails because it serves priva
and not public interests, Coase discredited th
economic theories that found the solution
every problem in larger government.

Coase's work appeared in 1961, ar
Buchanan's in 1962, the same year that the
Virginia colleague Warren Nutter publishe
his monumental *Growth of Industrial Produ
tion in the Soviet Union*, which challenge
economists' beliefs that central planning pr
duced high economic-growth rates. The wor
of all three has stood the test of time ar
achieved world recognition, but in the 1960s
produced more controversy than a single ec
nomics department could survive.

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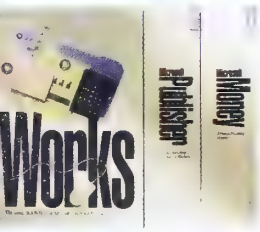

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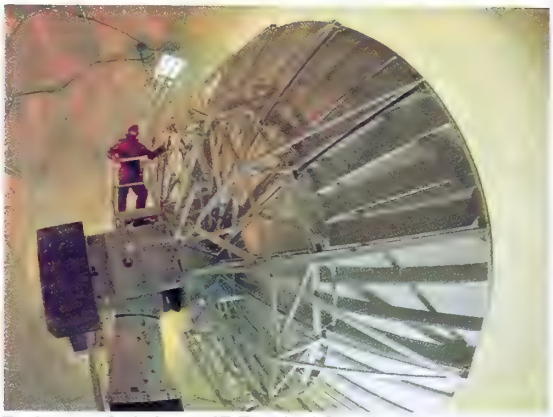

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BY GENE KORETZ

THE GLASS LOOKS HALF FULL TO FINANCIAL OFFICERS

Cassandras who see a double-dip recession and a slumping stock market ahead should take heart. Corporate America's financial strategists are forecasting a slow, uninterrupted recovery in 1992. That's the mildly reassuring message from a survey of the chief financial officers of the BUSINESS WEEK 1000 by A.T. Kearney Inc., a New York consulting firm. Says Goodyear Tire & Rubber Co. CFO Oren G. Shaffer: "There's a slight upturn, and it starts this quarter. The economy has stopped searching for a bottom."

Looking ahead, the CFOs think the economy will grow by 2.5% in 1992 (table), enough to warrant a 6.2% pickup in capital spending. And stock prices will hang in there, with the Dow Jones industrial average inching up to 3,287.

HOW CFOs SEE 1992: A MILD RECOVERY AHEAD

	Current reading	Yearend 1992
GROSS NATIONAL PRODUCT*	-0.6%	2.5%
CONSUMER PRICE INDEX*	3.4%	3.9%
DOW JONES INDUSTRIAL AVERAGE	3,045	3,287
3-MONTH TREASURY BILL RATE	4.7%	6.0%
30-YEAR TREASURY BOND RATE	7.9%	8.3%

*PERCENT CHANGE FROM A YEAR AGO

DATA: A.T. KEARNEY INC., BRIDGE INFORMATION SYSTEMS INC., BW

Meanwhile, the slow recovery promises to keep both inflation and interest rates restrained. Consumer prices will rise less than 4%, the cfos say, and long rates should rise only 30 basis points by the end of 1992, compared with a still-modest 130 basis-point increase in three-month T-bill rates (from 4.7% now to 6% next year). That nudge-up implies that the dollar won't strengthen enough to hurt the competitiveness of U.S. exports overseas.

On the bad-news front, 1992 will see continued belt-tightening via layoffs and other measures. General Electric Co., for one, has already announced a cut of 1,500 jobs—almost 5% of its work force—through the end of next year because the airline industry is in a slump and military outlays are down. Says Earl S. Landesman, a Kearney principal: "The larger the company, the more they'll want to squeeze overhead."

While they aren't pressing the panic button, the CFOs appear to be concerned about the U.S. domestic economy's lack of resilience. Indeed, many seem to be pinning their hopes for faster growth beyond 1992 on renewed stimulus from overseas. "Look for when the European and Asian economies recover," says GE CFO Dennis D. Dammerman. "They'll be able to help us out."

With Larry Light in New York

A NUMBER OF STATES ARE STARTING TO SOCK IT TO THE RICH

In *The Politics of Rich and Poor*, his recent book on emerging political trends, political analyst Kevin Phillips predicts that the widening gap in U.S. income distribution and the decline in tax rates on the wealthy in the 1980s will generate a backlash in the decade ahead. Judging by recent changes in state tax structures, that backlash may already have begun.

"The message seems to be that higher income taxes on the affluent are on the way," says economist Steven D. Gold of the Center for the Study of the States at the Nelson A. Rockefeller Institute of Government in Albany, N.Y.

Gold notes that a number of states have begun to target higher-income families and individuals for disproportionate tax increases. Last year, for example, New Jersey raised the tax rate on families with at least $70,000 in income, Arizona restructured its tax system to make it more progressive, Kentucky repealed the deductibility of federal income taxes (a policy that had favored the affluent), and Oklahoma added a new top tax rate for high-income people.

This year, the trend accelerated. California, Minnesota, and North Carolina passed new top rates for high-income taxpayers. New York phased out the benefit of low rates on the first $26,000 of income for taxpayers with incomes over $100,000. Maine and Vermont raised taxes for most people but raised them more for those with higher incomes. And Connecticut enacted a flat-rate income tax with substantial deductions and tax credits for low- and middle-income families that are phased out at higher levels.

What about the voting public's supposed antipathy to higher marginal income-tax rates? As one legislative staffer in North Carolina put it: "When legislators realized that only 1% or 2% of taxpayers would have to pay [the new top rate], their reservations about boosting the income tax melted away."

THE MEXICAN ECONOMY IS STILL STRUTTING ITS STUFF

The U.S. and Canadian recoveries may be fading, but the two nations' trading partner to the south is gaining strength. Aided by a surge in foreign investment attracted by the Salinas government's stabilization program and liberalized investment rules (and the pending North American free-trade pact), Mexico's growth will approach 5% this year, compared with 3.9% in 1990.

The government's achievements are impressive. Inflation has already been slashed from nearly 160% in 1987 to about 20% in the 12 months ended in September. The combination of tax reform, spending cuts, and privatization of government enterprises has transformed the government's deficit, which equalled a huge 16% of gross domestic product in 1987, into a fiscal surplus of $3.2 billion in the first half of this year.

About the only cloud on the horizon is a sharp widening of Mexico's trade deficit, with imports up nearly 40% over their year-earlier level. Economists at Manufacturers Hanover Trust Co. note, however, that Mexico's exports of manufactured goods have also climbed by 19%. And with its foreign reserves up by $11 billion since early last year, they say, Mexico's trade and current-account deficits still seem "quite manageable."

HYPERINFLATION IN DEVELOPING NATIONS GROWS LESS HYPER

The virulent inflation afflicting many less-developed nations is finally losing some of its grip. According to the International Monetary Fund, the average 12-month increase in consumer prices in the developing world posted its fourth quarterly drop in the second quarter of 1991—falling to 44.1% from 61% in the prior quarter and 122.3% in the second quarter of 1990.

The IMF says the slowdown "was especially marked in European and Latin American countries." In Poland and Yugoslavia, for example, consumer inflation fell from 1,076% and 1,777% in the second quarter of 1990 to 70% and 82% respectively. And in Brazil, the rate plunged from 5,953% to 374%.

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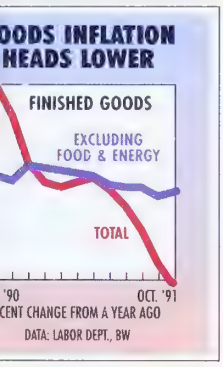
EMBER 25, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

T BEST, THE ECONOMY S DEAD IN THE WATER

A bombardment of bad economic data has forecasters running for cover. Pounded by disappointing October reports on job growth, consumer confi-ce, car sales, and industrial activity, many economists sharply scaling back their near-term expectations for economy. Most still dismiss the prospect of an out-t drop in real gross national product this quarter, not even that can be ruled out just yet.

ccording to *Blue Chip Economic Indicators*, which eys economists across the nation, real GNP is expect-o grow at an annual rate of only 1.9% this quarter. t November average of 53 forecasts is down nearly a percentage point from the October projection of . *Blue Chip's* Robert J. Eggert calls the downshift e of the largest quarterly drops we've seen from one th to the next" in the publication's 15-year history.



This sudden caution is well justified. The economy stopped growing in July, according to the Commerce Dept.'s composite index of four coincident indicators, which tracks the economy's monthly path. And in October, hours worked in nonfarm businesses, which are a good proxy for economic activity, began the fourth quarter below the third-quarter average.

oing into the fourth quarter, the numbers are saying the recovery is, at best, dead in the water. At worst, economy is on the verge of a renewed downturn.

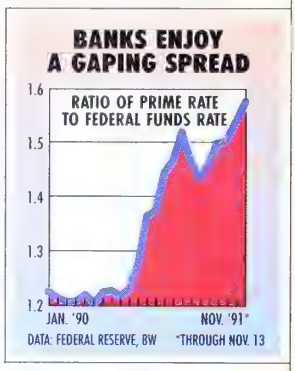
RODUCER RICES MPED IN TOBER

The failure of the economy to pick up the way most forecasters had expected casts a new light on the outlooks for inflation and interest rates. Prospects for lower tion in 1992 are much brighter now—even despite menacing look of October's producer price index. roducer prices of finished goods rose a steep 0.7% month—with a disturbing 0.5% increase in the core which excludes food and energy. Quirks in seasonal stment, particularly in the index for consumer dura-goods, accounted for some of the unexpectedly big , but prices of nondurable consumer items also accel-ed, as did costs of capital equipment.

owever, the October PPI looks like one of those one-th aberrations that does not signal a reversal of the rdown in goods inflation (chart). In a climate of weak and and idle capacity, goods producers, carmakers cially, will find it tough to make large price hikes stick. Sales of domestically made autos sank in early November to a dismal 5.7 million annual rate.

Heading into next year, the economy just doesn't have the ability to grow fast enough to keep inflation propped up. For the past 10 quarters, real GNP growth has averaged 0.5% a quarter with no gain greater than the economy's long-term growth trend of 2.5%. This pattern seems unlikely to change soon, and price pressures can build only if growth is sustained above its long-term potential.

At the same time, however, the combination of tepid economic growth and falling inflation severely limits the economy's ability to generate incomes for consumers and profits for business. In particular, companies have little pricing power, which keeps the squeeze on profit margins, despite continued cost-cutting.



Based on the third-quarter GNP data, BUSINESS WEEK estimates that corporate operating profits fell to an annual rate of $281.6 billion last quarter, from $284.4 billion in the second quarter. Moreover, operating earnings as a percentage of gross domestic product also fell slightly, suggesting that margins were still under pressure last quarter.

If fourth-quarter demand shapes up the way forecasters expect—or worse—the pinch on margins is sure to continue. Despite companies' past efforts to cut costs by laying off workers, even more jobs may be lost as businesses struggle to improve their profit margins. If so, that will keep the squeeze on consumer incomes as well.

INTEREST RATES KEEP SLIPPING LOWER

A weak economy and receding inflation mean that interest rates—both short and long—may be headed lower than many economists had thought. Despite the Federal Reserve's 13 cuts in the federal funds rate, from 8¼% last fall to 4¾% now, the dearth of bank lending continues. Banks are using their funds to restructure past bad loans, meet higher capital requirements, and satisfy strict regulators, rather than make new loans.

Loan demand is also weak, but banks have not dropped their prime rates as much as the Fed's huge easing would usually make room for (chart). The prime rate, currently at 7½%, is nearly 60% larger than the fed funds rate. Banks have not enjoyed a spread that wide since just after the 1969-70 recession.

In the 1980s, the prime averaged 20% above the funds

ERIC HOFFMANN/BW

rate. That spread implies a prime rate below 6%. Because of the unique depressants on the banking system, the Fed may have to ease policy more than it has in the past in order to shake the economy out of its daze.

Stubbornly high long-term rates are another problem. Tax-cut fever threatens an even bigger flood of Treasury borrowing, and reports like the October PPI keep inflation fears alive. However, as inflation's improvement becomes more evident, long rates will drift lower.

SHOPPERS KEEP SAYING 'CHARGE IT'

The central bank's aggressive easing on Nov. 6 was supposed to torpedo the growing worries about the recession's return. But for consumers, the Fed's actions during the past year have been a dud. The cuts in the federal funds rate have resulted in little, if any, reduction in the borrowing costs of consumers.

FED EASING HAS BYPASSED CONSUMERS

Interest rate on:	Year ago	Early Nov.	Change
FEDERAL FUNDS	8.00%	4.75%	–3.25
4-YEAR CAR LOAN	12.22	11.18	–1.04
2-YEAR PERSONAL LOAN	17.30	16.90	–0.40
BANK CREDIT CARD	18.76	18.78	0.02
30-YEAR FIXED MORTGAGE	10.13	8.83	–1.30

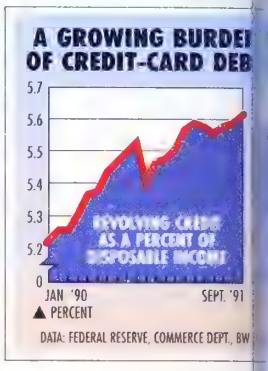
DATA: FEDERAL RESERVE, HSH ASSOCIATES, *BANK RATE MONITOR*, BW

In the past year, for instance, the central bank has cut the fed funds rate by 3.75 percentage points. But the average lending rate for a 30-year fixed mortgage has fallen by just 1.3 points, to 8.83%. And the average interest rate on a credit-card balance has actually increased slightly to 18.78%, from an already hefty 18.76% a year ago (table).

Until borrowing costs fall appreciably, households are unlikely to buy such rate-sensitive items as homes, cars, and appliances. And without the thrust from consumer demand for big-ticket items, this recovery doesn't have the fuel to keep going.

In September, consumer installment credit dropped by $1.5 billion, its fifth consecutive decline. Installment debt outstanding is now equivalent to 17.6% of disposable income, down from the record 18.9% hit in late 1989. In particular, consumers are steering away from car loans. Auto financing dropped $2.3 billion in September and has been declining steadily since March, 1990.

One area where consumers did accelerate their borrowing in September was revolving debt, mostly credit cards. Such credit increased $2.4 billion, the largest monthly gain since March. Although households are paying total installment debt, revolving credit has risen to 5.6% of disposable income—the highest ratio since the Fed started to track consumer borrowing in 1975 (chart).



The rise in revolving credit is unusual in the early stages of a recovery. And in today's environment of sluggish consumer spending and stratospheric charge-card rates, the growing use of plastic may be a sign of distress borrowing by financially strapped consumers. Indeed, consumer spending has far outpaced the gains in aftertax income this year. And the increase in revolving credit in September came when retail sales, aside from autos, were extremely sluggish.

With households struggling to make ends meet, consumers may rely heavily on credit cards during the holiday shopping season. That might add some luster to what is expected to be a blue Christmas for retailers. But when the first quarter of 1992 rolls around, consumers will just have to channel more cash to debt repayment. With job and income prospects looking shaky, that would end up hurting the recovery.

So far, amid all the shelling from shaky consumer fundamentals, stingy banks, paltry profits, and the like, the Federal Reserve's rate cuts have provided the recovery with some measure of shelter. However, they might not be able to prevent a direct hit to fourth-quarter GNP.

THE WEEK AHEAD

MERCHANDISE TRADE DEFICIT

Tuesday, Nov. 19, 8:30 a.m.

The foreign trade deficit is expected to have narrowed slightly in September, to $6.2 billion, from $6.8 billion in August, according to economists surveyed by MMS International, a division of McGraw-Hill Inc. Exports, which have dropped in three of the past four months, probably rebounded in September. Imports, which fell 0.6% in August, are expected to be little changed. However, imports may have risen more strongly than projected. That's suggested by a sharp gain in customs-duty payments. That would mean the trade deficit widened in September, as it has through the summer months. In June, the deficit hit an eight-year low of $3.8 billion. But since then, export growth has slowed down, while imports, especially foreign cars and crude oil, have begun to pick up.

HOUSING STARTS

Wednesday, Nov. 20, 8:30 a.m.

Housing starts probably remained at an annual rate of about 1 million in October, the same dismal pace reported in each of the past four months. The MMS expectation is suggested by the slight loss of total hours worked in the construction industry in October. The lack of vitality in homebuilding is a growing worry for the recovery. Despite almost a full percentage-point decline in mortgage rates since June, the housing industry may be slipping back into recession. That would hurt housing-related industries such as lumber, textiles, and appliances.

FEDERAL BUDGET

Friday, Nov. 22, 2 p.m.

The MMS economists expect the federal government to report a deficit of $25 billion for October, the first month of fiscal 1992. That's an improvement from $31.3 billion in October, 1990. However, most economists expect the federal budget to sink some $350 billion into the red for the year, far surpassing the stunning $268.7 billion record posted just last year. Moreover, those projections exclude any election-year tax package that could cause the deficit to soar closer to $400 billion.

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GOVERNMENT

NOVEMBER 25, 1991

A ROAR OF DISCONTENT

VOTERS WANT HEALTH CARE REFORM—NOW

The seismic tremors started registering about a year ago. In survey after survey, pollsters began picking up distress signals from middle-class voters worried about health care costs. Under pressure from employers, workers were being forced to dig deeper into their pockets to pay for medical bills. For recession victims or those worried about losing their jobs, there was a more palpable fear: the nightmarish prospect of losing the safety net provided by health insurance.

These rumblings triggered a political earthquake on Nov. 5, when lightly regarded Democrat Harris Wofford upset former Attorney General Richard Thornburgh in Pennsylvania's U. S. Senate race. Wofford managed the feat by railing against indifferent politicians in Washington—and declaring health care "a basic right." For business, the message was clear: Health insurance had been transformed from a problem for the downtrodden into a middle-class concern (poll). "This says people are serious about fixing the health system," observes American Hospital Assn. President Dick Davidson.

Naturally, there's no shortage of Dr. Fix-its lining up in Washington. With the Presidential campaign under way, Democrats are homing in on the health care "crisis." They're scoring points by depicting President Bush as out of touch—and out of town. Most of the Democratic contenders are embracing ambitious health-reform plans, and Capitol Hill is abuzz with competing proposals.

KEY CHOICES. The fury of the debate has caught the Administration flat-footed. Initially, the President's advisers hoped to delay any serious debate on a national health strategy until after the election. Now, his aides are scrambling to cobble together a proposal for the January State of the Union message. "The blessing of the Pennsylvania election is that it came one year before President Bush has to face voters," says Burton Yale Pines, senior vice-president of the Heritage Foundation. "He'd be resoundingly rejected if the election were held today."

Despite the rising clamor for reform, health experts caution that the complexity of the problem makes successful surgery an iffy proposition. Policymakers are split over the key question of whether the private sector or the government should be the central player in a new health scheme. The choices range from a Canadian-style socialized system to "choice" plans that give consumers tax credits and encourage them to shop for the best medical bargains (table).

Business is deeply divided, too. Big corporations, whose cost-control measures have failed to contain soaring medical expenses, are coming to the reluctant conclusion that a national system may be their last chance for relief. That, they hope, will shield them from health care providers' current practice of shifting the cost of caring for the uninsured onto large private payers. But small businesses, which often don't provide coverage for their workers, worry that they'll get socked with huge new mandated costs. Hospitals and doctors also will oppose any changes that could dictate fees and reduce profits.

About the only thing everyone agrees on is that the current system is out of control. Medical costs have risen faster than the rate of inflation in 14 of the past 15 years and now account for 12% of gross national product, or a whopping $657 billion a year.

At the moment, political rhetoric is outpacing some of the thorny financial calculations on who pays for what, and when. In Pennsylvania, Wofford remained studiously vague on how his national health plan would work. Democrats "can tap into a large seam of inchoate discontent," says the Brookings Institution's Henry J. Aaron. "But the more specific their solutions, the more they run into problems."

That's not stopping Democrats from offering cures. Nebraska Senator Bob Kerrey, who is making health reform a key issue in his Presidential campaign, backs legislation calling for a federal takeover of the health care system. The government would write the checks in a system financed by payroll taxes and higher levies on the wealthy.

OTTAWA GENERAL HOSPITAL: SOME DEMOCRATS FAVOR A CANADIAN-STYLE SYSTEM OF SOCIALIZED MEDICINE

WOFFORD: HIS CAMPAIGN TOUCHED A RAW POLITICAL NERVE

HEALTH POLITICS: A PRIMER

SINGLE-PAYER

This is the Canadian approach, in which everyone is covered whether or not working. While hospitals and physicians remain private, all bills would be paid from a single purse—the U.S. Treasury. Rates would be strictly regulated to control costs. In theory, administrative savings could come to $75 billion a year. This scheme is endorsed by Senator and Presidential hopeful Bob Kerrey (D-Neb.) and House Democrats such as Representative Marty Russo of Illinois

MARKET-BASED

Individuals would shop for their own health coverage, and the government would provide tax credits or vouchers to everybody. Low- and middle-income families would receive a government check if the value of their credit is greater than their income tax liability. The conservative Heritage Foundation and **Budget Director Richard Darman** favor this plan, but President Bush hasn't endorsed it yet

PLAY-OR-PAY

Building on the current system, this would require businesses to provide health benefits or pay a payroll tax to support a fund for their workers, the unemployed, and the poor. This plan is advocated by Senate Democrats led by **Majority Leader George Mitchell** (D-Me.). Democratic Presidential candidate Paul Tsongas has endorsed a variation in which the taxes would go into regional funds to buy private insurance

INCREMENTAL REFORM

This plan would reform the current system, help small businesses buy coverage, create tax breaks for the self-employed, and urge employers to control costs through prepaid plans and managed care programs. This approach is backed as an interim step only by prominent Democrats, including Senator Lloyd Bentsen of Texas and Representative Dan Rostenkowski of Illinois. It's the centerpiece of Senate Republicans' reform ideas

hile this "single-payer" approach is le, the potential drawbacks are y: higher taxes, more government aucracy, and waiting lines for ex- ive surgical procedures. The White se and most of the health care Es- shment oppose this model.

VERTS. Other Democrats, including te Majority Leader George J. Mitch- D-Me.), back "play-or-pay" pro- ns. These plans give business two ons: Provide a core package of health insurance to employees, or pay a federal payroll tax of about 8% to support a government-insurance fund for the uninsured. This approach builds on the existing private system, but critics say it won't hold down costs. Although it faces stiff opposition from small business, play-or-pay is winning converts. On Nov. 12, a coalition of unions and large corporations, including Xerox, Safeway, and Georgia-Pacific, backed it. House Democrats may decide on a similar tack.

Where does all this leave President Bush? Mainly on the defensive, insisting that health policy is too complex to be fixed in the unseemly rush of an election campaign. But after Pennsylvania, that message is being drowned out. "Politicians who defend the status quo and say [health reform] is too complicated are missing the point," says James Carville, Wofford's campaign manager. "The country is clearly ready for something other than what it has."

One reason for Bush's hesitancy is the GOP's inability to come up with a consensus approach. Moderate Republicans, led by Rhode Island Senator John H. Chafee, want to move incrementally. They would start by making it easier for small businesses to buy insurance and by limiting malpractice awards. Some would even consider a new government program or employer mandates.

Free-market conservatives, led by White House Chief of Staff John H. Sununu, oppose new mandates on business and higher taxes. That leaves little maneuvering room. "It aggravates one of the biggest Republican weaknesses," says Democratic pollster Harrison Hick-

SYLVANIA'S MESSAGE

ania, the Kaiser Family Foundation rvard School of Public Health ed a post-election survey on Nov. 5-6 ults. Among its findings:

o issues mattered most in how you would vote for senator?

ealth insurance	50%
	29
/loss of job	21
's record	14

Which of the following three approaches to financing health care would you favor?

Businesses are required to provide coverage for all their employees or contribute to a fund that would cover all Americans	35%
A plan run by the government, financed by taxpayers, that would cover all Americans	32
Leave things the way they are	17

DATA: KAISER FAMILY FOUNDATION AND THE HARVARD SCHOOL OF PUBLIC HEALTH

man. "They'll try not to insult the insurance companies, and they'll protect their friends in business."

Budget Director Richard G. Darman, who is directing White House efforts to come up with a plan, leans toward a tax-credit scheme that gives individuals maximum choice. He's also exploring a cap on employers' tax deductions for insurance premiums. The higher taxes would be used to fund benefits for the uninsured. But neither free-market approach is given much chance of winning congressional support. And with Congress set to adjourn, none of the plans will start moving until well into 1992. Even then, it's far from clear how profound the changes will be, given the lack of political consensus.

Meantime, the political heat will only intensify. "We conceded the health iss to the Democrats," laments Republic pollster Linda DiVall. Gleeful Democr couldn't agree more. Says pollster linda Lake: "Health care could well the Social Security of the '90s—an iss that defines a political party to an ent generation."

By Paula Dwyer in Washington a Susan B. Garland in Detroit

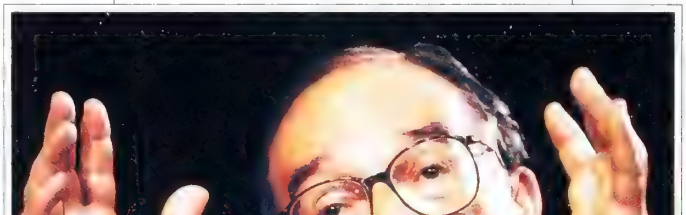
INTEREST RATES

THE SPLIT FED MAY KEEP RATES RIGHT WHERE THEY ARE

Hardliners on the board are pressuring Greenspan to wait for results

When Alan Greenspan goes to Capitol Hill on Nov. 19, he'll be greeted with praise for his latest moves to boost the economy. In just a week, the Federal Reserve chairman trimmed the key money-market interest rate twice and cut the rate the Fed charges on loans to banks by a half-point. Greenspan can count on the lowest short-term rates in 18 years to soften up the Senate Banking Committee as it sits in judgment on his nomination for a second term at the Fed's helm.

The chairman can only hope, though, that none of his questioners wants to look too deeply into those rate cuts. To financial markets and politicians, the Fed moves seemed like natural steps to boost an economic recovery that's fizzling. But a significant minority of the Fed's policymakers disagree—and Greenspan had to work hard to win even grudging approval for easier credit. The struggle inside the central bank means the Fed is likely to stay on the sidelines in the weeks ahead, waiting to see whether its earlier easing will spark the economy.



GREENSPAN MANAGED JUST A GRUDGING APPROVAL OF EASIER CREDIT

Markets had been expecting the Fed to cut rates since the Oct. 1 meeting of its Federal Open Market Committee. But that meeting revealed an unusual split among policymakers. Presidents of the Fed's 12 regional banks—who usually fear inflation more than slow growth—reported that businesses and consumers were increasingly worried about the recovery. The Fed's Washington-based governors were skeptical. "Some of the folks here were sitting back with their old forecasts and feeling pretty comfortable," says one governor. While the FOMC authorized Greenspan to cut rates, its mood warned him to go slowly.

By month's end, Greenspan was ready to move. But two governors disagreed. John P. LaWare argued that the economy was suffering from a lack of confidence, not money. And Wayne D. Angell feared that further rate cuts would spook inflation-shy bond traders. Rather than force a 3-2 vote, Greenspan enlisted the regional presidents for a telephone conference on Oct. 30. The lengthy debate kept the Fed's New York trading desk on the sidelines as market rates drifted down. Traders read the Fed's passivity as an ambiguous acceptance of a 5% target rate on Fed funds—loans between banks—down from 5.25%. The White House jumped in with a statement praising the reduction. "It may not have been a move before," says a Fed official, "but it sure is one now."

POOR TIMING? The debate resumed on Nov. 5, when the FOMC met again. Officials say the panel ordered Greenspan to cut rates once more. Bowing to the consensus, LaWare agreed to lower the Fed's discount rate; Angell dissented.

Now, it's looking as if that cut may be the last for some time. Many traders criticized the Fed for the timing of two latest moves: Cutting the discou rate immediately after the Republic loss in Pennsylvania's special Sena election on Nov. 5 "reinforced the m ket's perception that Greenspan is aw ward and influenced by political pr sures," says economist David M. Jon of bond traders Aubrey G. Lanston Co. And the Nov. 13 report of an une pected 0.7% rise in October produc prices, even though much of the increa was an aberration (page 25), panick the bond market into pushing up lon term rates. That strengthens the ha of Angell and other inflation hawks.

More important, even those offici who backed the recent cuts now want give them a chance to work. The Fed moves since summer have been design to "lean into the 50 mph headwind t economy is fighting," says a top offici But "if we're leaning too far when t wind stops, we'll fall over."

Some economists compla that these pauses have par lyzed the Fed at crucial m ments in this and past bus ness cycles. They hope so Christmas sales and the ad tion of two new Fed membe will break the deadlock. Whi House aide Lawrence B. Lin sey, a supply-side economi who favors strong growt would be a sure proponent easier money, but Sena Democrats have stalled a vo on his nomination. Economi Susan M. Phillips will soon sworn in, but her views monetary policy are less certain. If bot had been on board in October, First Bo ton Corp. economist Darwin L. Beck su pects, Greenspan would have had "a 5 majority, which is a much better sign for action than 3-2."

Even so, Greenspan is likely to adop a wait-and-see stance. Before the late moves, he saw an economy that could g either way—up into renewed recover or down into a second phase of rece sion. It's too soon to tell whether tw quick rate cuts will forestall the doubl dip—but they certainly have put the Fe out of action for a while.

By Mike McNamee in Washingto

Commentary/by Karen Pennar and Christopher Farrell

A SPARK FROM TREASURY COULD FIRE UP THE ECONOMY

t's a tired refrain we keep hearing from Washington: The economic recovery is being held hostage to poli- and a yawning budget deficit. To ly defense savings elsewhere in the nomy, last year's budget agreement ld have to be reopened. To enact cuts, offsetting savings would have e found. But is policy really so alyzed? Perhaps not.

Vithout even entertaining congres- al debate, there are some things the U.S. Treasury and king regulators could try to the economy moving.

irst, the government could rten the maturity of its debt. ation has come down under and short-term interest s are at their lowest levels 5 years. Today, three- and month Treasury bills are ding less than 5%, and five- notes are paying 6.63%. 30-year long bond, mean- le, is yielding around 7.9%. t reflects an inflation premi- paid investors because they inflation will rise.

NDING BOOM. The Treasury uld tell the world that it be- es prices will remain stable announcing that it will issue tly short- and medium-term t, and sticking to that. What uld happen? Long-term rates uld fall, providing needed nulus, and the interest bill on ure debt would shrink. ng bonds would go to 7% ost overnight," says William Gross, managing director at ific Investment Management which manages $35 billion onds. "It would be a shot rd around the world."

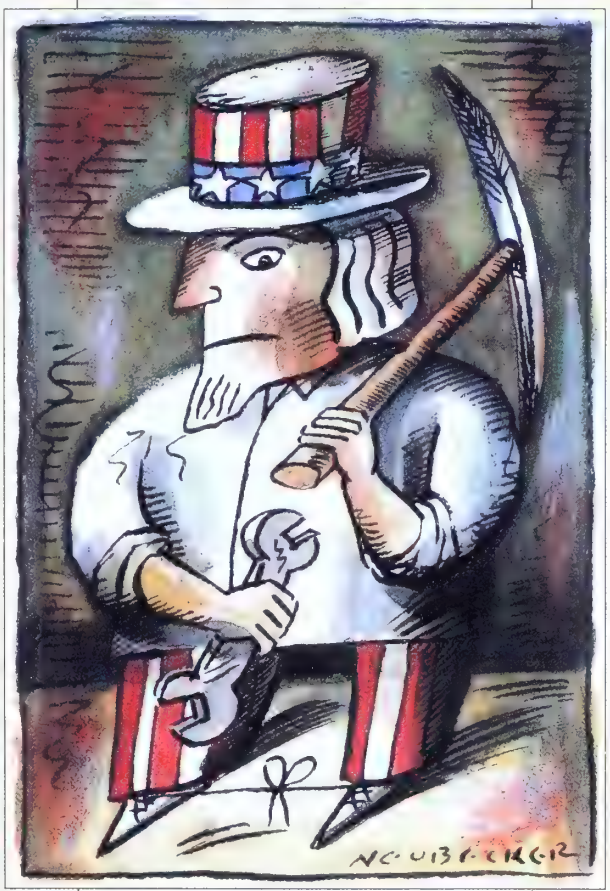
oseph Rosenberg, chief investment cer of Loews Corp. in New York, gests that Treasury substitute r- to five-year notes for 30-year ds at its quarterly refundings, reby saving taxpayers at least $500 ion in interest costs annually. Roberg, who urged the Treasury to e such a step in a recent article in *Washington Post*, says the "real eficiary of all this would be the S. economy." Lower long-term rates uld unleash a rush of mortgage ding and a capital-spending boom.

he Treasury's action could be rein- ced by the Federal Reserve Board, which could instruct its traders in New York to buy up the highest-yielding, longest-dated bonds in the course of their market dealings. "I think it would be a wonderful step," says economist James K. Galbraith of the University of Texas at Austin. "Keynes says about the most useful thing a central bank can do in a recessionary environment is purchase long-term debt."

While acting forcefully to lower rates, Washington could also get banks lending again. Profit-pinched banks have been loath to pass lower rates on to their customers. At the same time, banks are so busy writing off mistakes of the 1980s that they are unwilling to risk making new ones. Finally, regulators have pressured banks to build up capital and be cautious.

One quick, painless, and not very costly way to boost bank profits would be for the government to pay interest on more than $20 billion in idle reserves that banks keep to back up deposits. David D. Hale, chief economist at Kemper Securities Group Inc. in Chicago, says that if banks were paid the current T-bill yield on reserves, it would boost their profits by more than $1 billion. If they were paid interest on reserves, he argues, banks wouldn't feel compelled to earn profits by keeping their prime lending rate so high.

Interest on reserves might help, says Albert M. Wojnilower, senior adviser at First Boston Corp., but there are plenty of banks that are already profitable. Instead, he argues, banking regulators should impose broad growth targets for bank loans and other assets and ensure that banks meet those targets. "Banking is like a utility," he says. "You expect an electric company to generate electricity."



LOUD AND CLEAR. These ideas aren't entirely new, and they've had a mixed reception in the past. The U.S. Treasury, which sold $1.5 trillion in securities last year, has long held to the view that the smooth functioning of the government securities market requires that investors be able to choose from a predictable and broad spectrum of maturities. Some Reagan Administration officials floated the idea of shortening debt maturities in 1981, but they got nowhere. In the early 1960s, the Fed tried to bring long rates down by buying up long bonds in the open market, with limited impact. And even the force of law, embodied in the Community Reinvestment Act, hasn't prevented bankers from discovering ways to cut off some borrowers.

There are no guarantees that what investors and lenders fear—a return of inflation and a new cycle of bad loans—won't come to pass. Periodic spikes in prices, such as October's 0.7% jump in producer prices, only fan such worries. But there is a better chance of success if the government commits itself to low inflation and low interest rates with a policy that is loud, clear, and sustained. The aim is to change expectations and thereby boost confidence, spending, and borrowing. It won't happen overnight, and it won't happen if the government says one thing and does another. But inaction won't get the economy off dead center. These relatively easy measures just might.

ROBERT NEUBECKER

LABOR

DONEWALD (RIGHT): CONWAY "IS NOT CAPABLE OF PULLING THE COMPANY OUT OF CHAPTER 11"

MUTINY IS IN THE AIR AT AMERICA WEST

As it plunges deeper into the red, some workers are out for blood

Joanne Canfield was thrilled to be hired as a flight attendant for America West Airlines Inc. But just 18 months later, she found herself laid off. Worse yet, as one condition of her employment, Canfield bought 371 shares of AWA stock. By the time she left, the stock was in free-fall—and AWA was pressing for the $2,797 it had lent her to buy it. With her shares now worth about $600, she wishes the airline had "never hired me in the first place."

Canfield and others like her may soon be exacting their revenge. AWA's 13,000 employees hold about 35% of the distressed airline's stock. And as the carrier sinks further into the red, some of those employees are mustering their resolve for an unlikely objective: to topple Chief Executive Michael J. Conway from the job he has held for just two months.

DWINDLING GOODWILL. It's a marked shift in sentiment for employees of AWA, which had depended on the camaraderie of its mostly young and low-paid workers. Most employees want to help keep the airline aloft. But goodwill toward management has been dwindling since AWA's Chapter 11 filing last June. "The majority of employees we've talked to feel Mike Conway is not capable of pulling the company out of Chapter 11," claims Linda Donewald, a former AWA employee and a leader of America West Airlines Employee-Owner Corp.

Conway dismisses the dissidents as "malcontents" who are "shooting from the hip." Says Conway: "This is not Eastern Air Lines, and I'm no Frank Lorenzo. We have no intention of flying this thing into the ground." AWA General Counsel Martin J. Whalen calls the group "a self-generated rump group with an ax to grind." Indeed, another group, the Employee Reorganization Panel, also participates in the bankruptcy proceedings. And its chairman, Bruce Cronin, says "we are completely confident" in current management.

Yet the dissidents can hardly be dismissed out of hand. The head of the equity holders' committee in the bankruptcy proceedings, a pilot and AWA's most senior employee, is listening carefully: "They shouldn't be taken lightly," says Richard Delafield. Also paying attention is Penn Ayer Butler, an attorney for the creditors' committee. "We are fully behind the company," says Butler. "But to say we are fully behind Mike Conway would be stretching it."

> AWA's general counsel brands the dissidents 'a self-generated rump group with an ax to grind'

Conway, the focus of all the attention, is a financial whiz who hit the airline business in 1980 as controller at Continental Airlines Inc. A year later, he joined AWA. He was instrumental in swinging the financings that let the carrier grow quickly from a tiny operation to a far-flung, $1 billion carrier. But along with growth came onerous debt. As a result, AWA has never been able to put together a string of profitable years. So far this year, AWA has lost $166 million on revenue of $1.1 billion.

SHUFFLING ROUTES. Now, Conway is searching for ways to recapitalize AWA. A six-month grace period for $100 million in deferred payments on jet leases starts expiring on Dec. 1. If it defaults, AWA could be grounded. Then, Northwest Airlines Inc. and GPA Group PLC, which advanced AWA $55 million in bankruptcy financing, could force an asset sale. So, to tide itself over, AWA has been bargaining with Kawasaki Leasing International Inc. for a loan of $23 million.

Even his critics give Conway credit for reducing costs fast by reshuffling routes and cutting 2,200 jobs. The company says those two steps alone will save $100 million annually. It will need the help. Flooded with discount tickets issued to stoke business earlier in the year, it reported a third-quarter operating loss of $29 million—some distance from the $9.9 million loss it projected.

That's why dissident employees are looking for a way out. On Oct. 30, the group met with Northwest President John H. Dasburg to voice their displeasure with Conway. They have even taken their case to Arizona Republican Senator John McCain. What worries workers most is that with AWA stock near $1 a share, Conway may be angling for a merger or sale to Northwest or another company. That, says Whalen, "is way the hell premature."

The dissidents say they're mulling whether to ask the bankruptcy court to push Conway out. They'll do it, they say, if the airline doesn't hit the $2.3 million fourth-quarter profit it projected for the bankruptcy court. Even Whalen says that forecast is "probably unrealistic," although he blames AWA's bleak performance on the sluggish economy.

Joanne Canfield knows all about recessions. These days, she distributes the dissidents' newsletter and works the phone to enlist other employees in their cause. Those calls are getting easier with each piece of bad news from AWA.

By Eric Schine in Phoeni

BIG STEP FOR FUSION POWER -BUT NOT THAT BIG

pite a successful test in Britain, research funds will remain scarce

or more than 40 years, scientists have chased the dream of fusion energy. Hoping to harness the reactions that power the sun, they built giant machines and run hundreds of tests. But not until Nov. 9 did finally experiment with the fuel would actually stoke a real power . On that Saturday evening, Euroscientists injected tritium, a heavy of hydrogen, into the Joint Europe-Torus (JET), a research reactor 50 west of Lon- And for a sec- the reactor pro- d 1.7 megawatts th of speeding rons, enough en- to power 600 es. "Our aim is ow the scientific bility of fusion," JET physicist J. Dietz. "What id was the nec- ry first step." fusion propo- s, the European riment was wel- news. "It's an ortant mile- e," says Richard etrasso, a physi- at the Massachu- s Institute of nology's Plasma on Center. But e fusion could eday live up to promise—a p, abundant en- source that pro- s little hazardous waste—don't sell oil stocks yet. For one thing, the tion generated only one-tenth of the er used to produce it. Moreover, the riment merely confirms what scien- calculations had long predicted—adding tritium to the lighter hydro- fuel used in past tests dramatically ds up the fusion reaction and boosts power output. That proves, in theory way, that fusing atoms could gener- as much commercial power as exist- nuclear-fission plants.

ut the experiment didn't answer a ber of crucial scientific questions. nout answers, researchers can't h the key stage called ignition, when fusion reaction makes enough heat to keep itself going. One worry, for example, is whether the soup of electrically charged atoms that swirls inside a fusion reactor will become unstable, shutting the reaction down. Another uncertainty: Will the reaction heat the soup as much as some calculations show? If it doesn't, the reaction won't sustain itself and reach ignition.

The JET experiment didn't use enough tritium to resolve these doubts. If scientists had used more of the material, the walls of their reactor would have become too radioactive for researchers and technicians to work inside it. Both JET and a similar test reactor at Princeton University are building systems to handle the radioactivity, but the next stage of experiments won't begin until 1993 at Princeton and 1994 in Britain.

Even if scientists clear all those hurdles, though, a prototype power plant is at least 40 years away (table). And fusion boosters admit that fusion can't compete economically with coal, oil, or fission reactors at today's prices.

The experiment comes at a crucial time for fusion research. Support has been shaky, especially in the U. S. "In the past decade, our progress has been limited by budgets, not technical problems," says Ronald C. Davidson, director of Princeton's Plasma Physics Laboratory. The Energy Dept., for example, recently axed plans for an ambitious next-generation reactor, Princeton's $1.4 billion Burning Plasma Experiment.

MAMMOTH MACHINE. Scientists, however, are determined to push ahead. They are calling for the U. S., Europe, and Japan to commit more than $5 billion for the International Thermonuclear Experimental Reactor (ITER), a mammoth machine that's a necessary step to a prototype commercial reactor. While support in Japan and Europe remains strong, fusion boosters worry that wrangling over the site of the reactor could derail the effort. So the news about progress in fusion comes at an especially good time. "To keep the momentum for ITER going, they have to show they are moving ahead," points out physicist John M. Soures of the University of Rochester, who is working on a competing form of fusion power.

JET spokesman John Maple insists that the experiment was planned and scheduled on scientific grounds alone. Still, he readily admits the value of publicity. "I suspect it will increase confidence in our work by those outside the field," he says. Not in Congress. Staffers say that because the results were long expected, they won't boost political support for fusion. It will take more than this small step on the long path to fusion energy to persuade governments to shell out the billions needed to finish the journey.

By John Carey in Washington

A LIKELY TIMETABLE FOR FUSION POWER

1993–97 Tests with large amounts of tritium at the Joint European Torus and Princeton's Tokamak Fusion Test Reactor

1992–97 Designing the International Thermonuclear Experimental Reactor (ITER), a $5 billion to $6 billion machine jointly funded by the U.S., Japan, and Europe

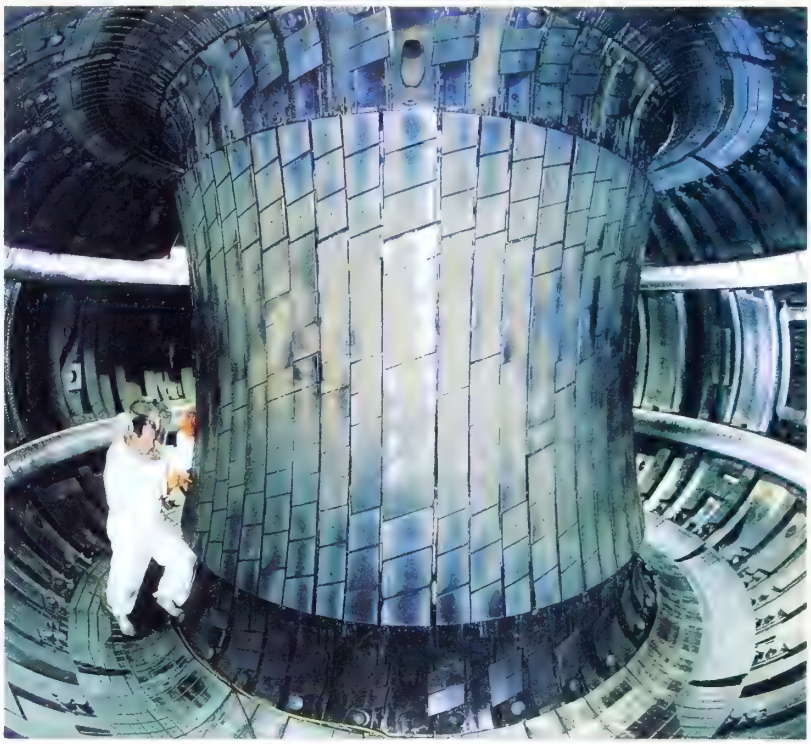
1997–2006 Building the ITER

2007–20 Designing a prototype power plant

2020–25 Building the prototype power plant

2030 Large-scale fusion-power generation

DATA: BW



EUROPE'S EXPERIMENTAL REACTOR: MANY CRUCIAL SCIENTIFIC QUESTIONS REMAIN

EDUCATION

PRODUCTIVITY ASSURED —OR WE'LL FIX THEM FREE

Starting in 1994, L.A. high school grads will come with warranties

When American manufacturers decided 10 years ago that boosting quality was the key to regaining their competitiveness, a beefed-up warranty often was the first step. If they couldn't produce a defect-free car, the thinking went, they could at least guarantee to the customer that he wouldn't be stuck with repair bills for the first 50,000 miles. Quality would follow when the factory figured out that building it right the first time was cheaper than paying warranty claims.

Now, American educators—who've taken their share of the heat for the nation's fading competitiveness—are getting the same message. Los Angeles Unified School District, the nation's second largest, says that beginning with the class of '94, each high school graduate will come with a written warranty assuring companies that the grad has the basic skills needed to enter the work force. If the employer is not satisfied, the school district will provide remedial training at the district's expense.

The idea has been tried by a few other school systems, including districts in Prince Georges County, Md., and Plymouth, Mass., which have experienced few if any "returns." But the sprawling Los Angeles system may be the ultimate experiment. Over half its 640,000 students live below the poverty line. Half speak little or no English when they enter school.

BUSINESS NUDGE. Los Angeles' diploma warranty will go well beyond the three Rs. It is based on the July recommendations of the Labor Secretary's Commission on Achieving Necessary Skills (SCANS), which attempt to identify the so-called skills gap between graduating seniors and entry-level employees (table).

If the warranty program works, it will force a top-to-bottom makeover of the L. A. system, much like the overhauls that manufacturers went through in the past 20 years. "It's going to make a difference in what we teach and how we teach," says William R. Anton, superintendent of schools. The major curriculum change—and expense—will be offering students access to computers.

The rest can be handled by having teachers teach the current curriculum differently. Take the teaching of teamwork. "In the business world, sharing responsibility for a project is cal teamwork," says Assistant Superint dent Gabriel Cortina, one of three edu tors on the Labor Dept. panel. "In cla rooms, the way we teach today, called cheating." Educators now finding that two or three students wo ing as a team can often solve proble that they couldn't handle individually

The L. A. warranty, and the rebuildi it portends, was a direct result of pr ding by local businesses. They've had boost spending on remedial training a technology to overcome lower-skill workers. Pacific Bell, for one, has fou more than half its applicants for ent level jobs, such as operators, fail a si ple seventh-grade reading and math te

A GIMMICK? Some critics dismiss t warranty as a gimmick. A *Los Angel Times* editorial railed against it, conclu ing that if an L. A. diploma was s worth anything, it wouldn't need a wa ranty. And the teachers' union was liv at the announcement, which came tw days after the scho board approved a 3% c in pay. "It's smoke a mirrors to take attenti away from the real pro lems," says spokeswom Catherine M. Carey.

Outsiders aren't sure. "Our teachers vie it as a big vote of con dence in them," says Be nard Sidman, superinte dent of the Plymout Carver Regional Scho District in Plymout Mass. There, a two-yea old program requires st dents to pass the state ninth-grade basic-skil test before graduation.

Local executives no that the warranty itself less important than wh it signals: recognition the problem and willin ness to confront it. "It clear [Anton] doesn't hav all the pieces in place, bu someone, somewhere in leadership position has t put out the vision," say Kenneth G. Docter, Price Waterhouse vic chairman. "Think of it a Ford saying 'Quality Job 1.'" Ten years late Ford may not match th Japanese for quality, bu it's a lot closer than if hadn't set the goal.

By Larry Armstrong i Los Angeles, with Geo Smith in Boston

AT FAIRFAX HIGH: TEAMWORK ABILITY AND TECHNOLOGY SKILLS ARE NEEDED

SKILLS LOS ANGELES AIMS TO GUARANTEE

The Labor Dept.'s Commission on Achieving Necessary Skills identified these attributes as those most sought by business in high school graduates:

THE FOUNDATION

BASIC SKILLS: Reading, mathematics, effective communications

THINKING SKILLS: Problem solving, reasoning, mental visualization

PERSONAL QUALITIES: Integrity, self-management, initiative, responsibility

THE APPLICATIONS

RESOURCES: Budgeting time, money, materials, and staff

INTERPERSONAL SKILLS: Leading, negotiating, working on teams

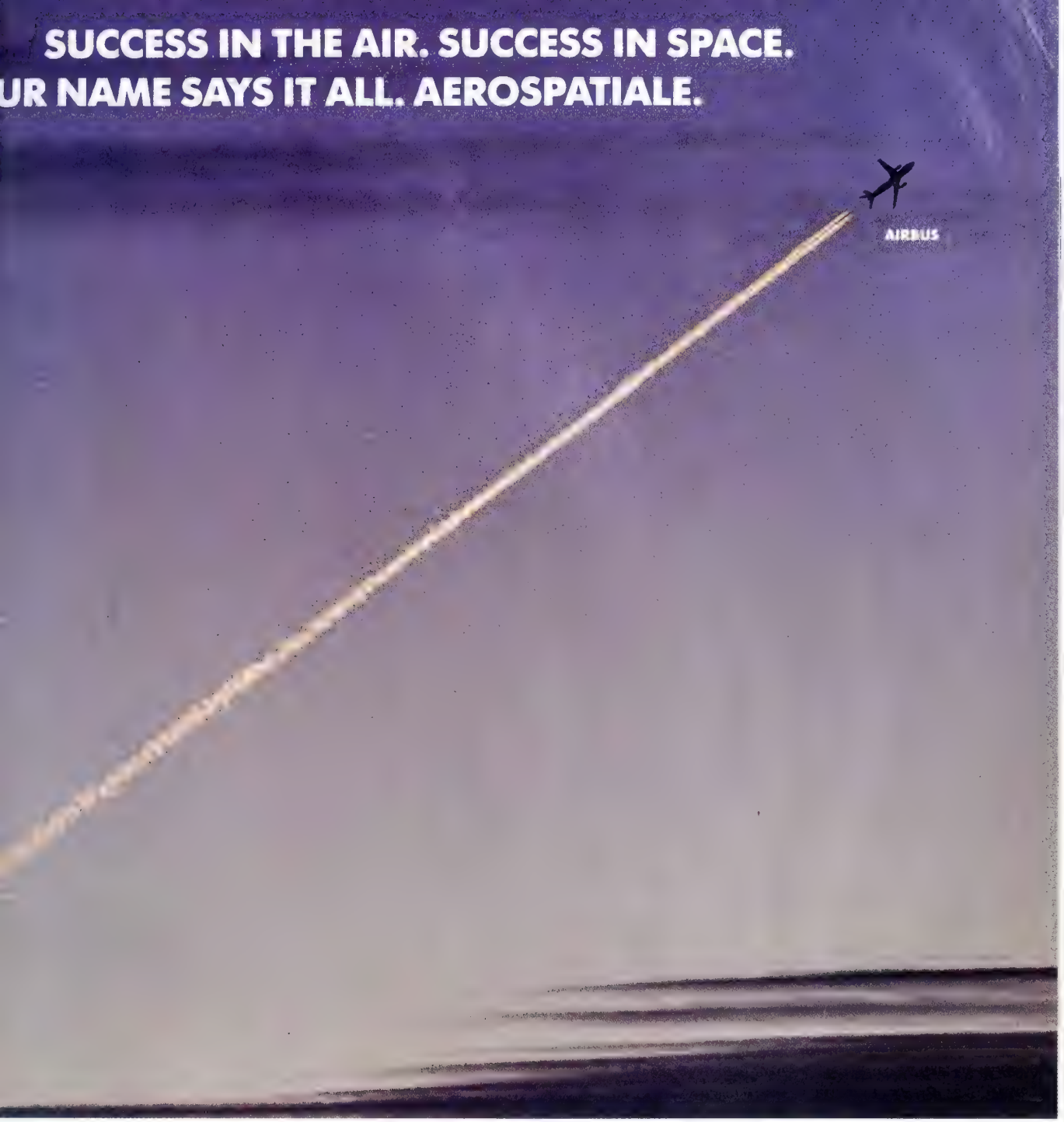
INFORMATION: Using technology to get, organize, and interpret data

SYSTEMS: Understanding and improving social and organizational systems

TECHNOLOGY: Selecting, applying, and troubleshooting technology

DATA: LABOR SECRETARY'S COMMISSION ON ACHIEVING NECESSARY SKILLS

SUCCESS IN THE AIR. SUCCESS IN SPACE.
UR NAME SAYS IT ALL. AEROSPATIALE.



Airbus accounts for 30% of the world civil aviation market. range extending from the twin engine medium haul to the engine long haul aircraft, 1760 Airbuses have already been throughout the world - including 550 to North America - rly demonstrating its enormous commercial success.

AEROSPATIALE ploughs back more than 35% of its nue into research and development. This percentage, the d's highest, places AEROSPATIALE firmly at the heart of all major European aerospace research and elopment. From the outset, AEROSPATIALE's ory has been marked by a series of international cesses through active, true cooperation. One example is Ariane, with 50% of the launch vehicle market; another are the helicopters with a 33% share of world sales. 70% of AEROSPATIALE's turnover is realized from programs which involve cooperation with other aerospace partners.

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THE S&L SCANDAL

MR. S&L FACES THE MUSIC

Will Charles Keating clear his first legal hurdle—or go directly to jail?

It's fitting, probably, that the show-business capital of the world should be the site of the first trial of financier Charles H. Keating Jr. From the start, Keating's trial has been good theater. On the first day of jury selection, an elderly widow accosted Keating in the front of the courtroom, shouting that he had robbed her of her life savings. A few weeks later, another irate investor, cable-TV talk-show host Skip Lowe, bopped Keating on the shoulder with a powdered wig. In the courthouse hallways, angry bondholders chanted: "Mr. Cheating, where's our money?"

The curtain draws near, but only for Act I. The case, where two months of testimony have concluded, tackles a narrow slice of the complex charges against Keating in connection with the 1989 failure of Lincoln Savings & Loan Assn., which will cost taxpayers some $2.6 billion. It's the first step in a legal gauntlet for Keating, who has come to symbolize the nation's massive S&L crisis.

Amid all the uproar, serious issues are at stake. The Los Angeles County criminal trial focuses on whether Keating defrauded 18 of the more than 20,000 buyers of $250 million of bonds sold by Lincoln's parent, Phoenix-based American Continental Corp. Prosecutors have pinned their case on proving that Keating failed to disclose to investors the sorry state of American Continental's finances and its tangles with regulators.

NO SMOKE. Keating's defense is that he wasn't directly involved in bond sales and that he relied on advice from lawyers and accountants about the bonds. Defense lawyer Stephen C. Neal adeptly used his cross-examination to elicit testimony favorable to Keating from some prosecution witnesses. Then the suave, 42-year-old Chicagoan surprised courtroom observers by resting his case on Nov. 7 without calling any defense witnesses. He says he didn't need to: "The prosecution hasn't come close to proving what they have to prove"—that Keating knowingly and intentionally defrauded the 18 bondholders named in the case.

Prosecutors concede that they found no smoking gun to link Keating with fraud. But they contend that the mosaic they pieced together from the evidence of more than 50 witnesses clearly shows Keating calling the shots for a bond-sales program that relied on deceiving naive investors. Former employees told of trips to Phoenix, where Keating exhorted them to sell more bonds. A parade of elderly investors told how bond salesmen working at Lincoln branches persuaded them to cash out of certificates of deposit and buy uninsured American Continental bonds.

Some of the strongest prosecution testimony came from former Lincoln President Ray C. Fidel, who in March pleaded guilty to six fraud counts. He testified that when he told Keating that regulators insisted on moving bond sales out of Lincoln branches, Keating replied: "Can't we cheat?"

NO COMMENT: KEATING COULD FACE UP TO 10 YEARS IN PRISON AND $250,000 IN FINES

If found guilty, Keating could face to 10 years in prison and fines $250,000. But his problems will hard stop there. He faces a host of civil cas in Arizona, the Securities & Exchan Commission may sue, and federal indi ments have long been expected.

Keating, resplendent in his expensi suits and silk ties, isn't the only regul in the dingy Los Angeles courtroom. is Mike Lappin, 76, a retired actor fr Sherman Oaks, Calif., who three yea ago invested his $35,000 life savings American Continental bonds. He sa the bond fiasco has been "heart-re ing." And now, like Keating, Lappin anxiously awaiting the verdict.

By Kathleen Kerwin in Los Ange

MARKETING

THE SAM'S GENERATION?

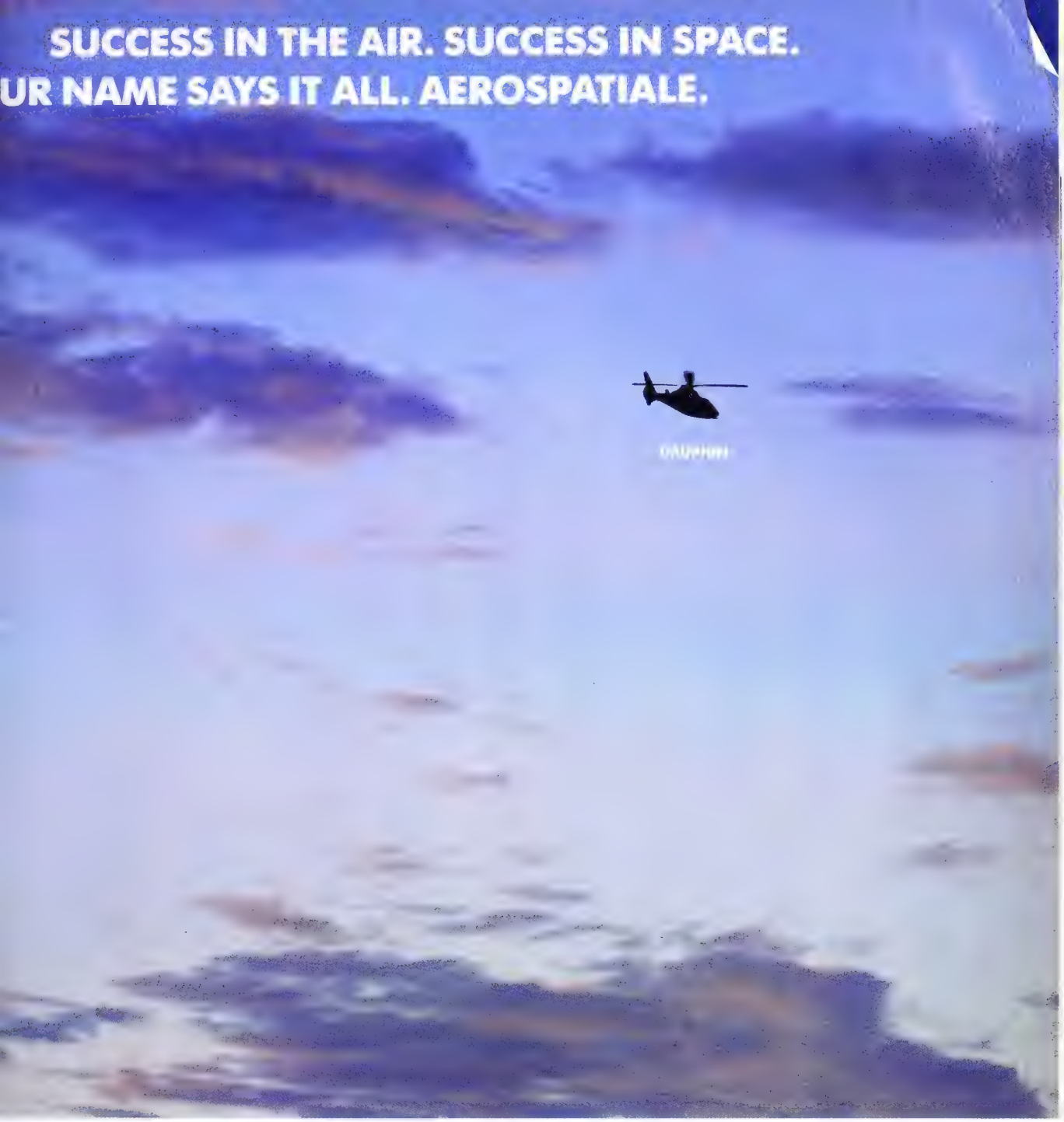
Wal-Mart takes the soft-drink challenge with its own brand

Sam's American Choice. It may not have the cachet of "Coke" or the familiar ring of "Nabisco." But the fledgling brand boasts a formidable natural advantage: the marketing clout of Wal-Mart Stores Inc. and legendary founder Sam M. Walton. Sam's colas and fruit juices are already popping up in Wal-Marts across the country. And the experiment could produce a slew of Wal-Mart products developed to compete head-to-head with national brands.

The Bentonville (Ark.) retailer isn't backing away from its successful formula of offering name brands at low prices. It's simply responding to recession-wea-

WAL-MART'S PRIVATE-LABEL COLA: WATCH FOR SAM'S LINE OF COOKIES NEXT

ry consumers looking for value in near every product category. And without th hefty marketing costs incurred by nam brand manufacturers, Sam's bran should yield fatter profits. A recent Ga lup Poll done for the Private Label Ma ufacturers Assn. found consumer acce tance of store brands at a record hig with nearly 90% of those surveyed ha



AEROSPATIALE is the world's leading exporter of helicopters. machines have already been sold to 118 countries. In the United s, this commercial success is reflected by the company's rating as in the American civil market with 28% penetration. In Japan, it is eader, with a 46% market share as well as in Canada with 42%. One f every three helicopters flying today is from AEROSPATIALE. AEROSPATIALE ploughs back more than 35% of its revenue research and development. This percentage, the world's est, places AEROSPATIALE firmly at the very heart of major European aerospace research and development. n the outset, AEROSPATIALE's history has been ed by a series of international successes through active, true cooperation. One example is Ariane, with 50% of the launch vehicle market; another are the helicopters with a 33% share of world sales. 70% of AEROSPATIALE's turnover is realized from programs which involve cooperation with other aerospace partners.

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ing bought them. "Consumers are becoming more reserved and are looking for value. It is a real sociological change," says Fraser Latta, chief operating officer of Cott Corp. The largest private-label bottler in Canada, Cott is supplying Sam's colas from U. S. plants.

While the Wal-Mart name already appears on such staples as paper towels and bathroom tissue, Sam's brand is decidedly higher quality and more prominently featured in the stores. The beverages are the first products with the new label, but retail analysts expect Sam's chocolate-chip cookies to come next, along with other foods. The new products sport attractive red, white, and blue packaging. The cola label boasts that Sam's products, made in the U. S. A., "offer better value than the leading national brands—great taste at Wal-Mart's always low prices." In a store near Dallas, a six-pack of Sam's cola recently was selling for $1.18, or about 20% less per can than a 20-can case of Coke.

QUALITY PITCH. Wal-Mart apparently has learned from other retailers, which stumbled when they offered customers low-priced store brands of low quality. "The customer doesn't want a lesser-quality product," says Karen Cmar, a retail specialist at McKinsey & Co. Many retailers have also failed to devote the merchandising, product design, and other resources needed to execute a store-brand strategy. "If anybody can do it, Wal-Mart probably can," says Cmar.

Wal-Mart won't discuss details of its latest experiment—or how far it might go. "We're very pleased with it at this early point," says a company spokesman. Retail analyst Walter Loeb figures Sam's brand could eventually top 10% of Wal-Mart's sales, which he sees hitting $44 billion this year and $56 billion next.

If that potential worries Wal-Mart's name-brand suppliers, they're not flinching. "Just about every retailer has private brands," says Lawrence D. Milligan, senior vice-president for sales at megamarketer Procter & Gamble Co. "When these store brands come out, they generally take their business from the tertiary brands, the Sunshines of the world," says Nabisco Foods spokesman Mark L. Gutsche. Sunshine Biscuits Inc., which says it's in the same league as Nabisco, begs to differ. Its ad director, Alexander Nichols, figures Sam's brand will hurt regional labels and generics.

No one expects store brands to explode at Wal-Mart. But a premium private label backed by Wal-Mart's clout will keep the big boys watching their own costs and quality. And where Wal-Mart treads, others are likely to follow.

By Wendy Zellner in Dallas, with bureau reports

COMPUTERS

DEC TRIES TO LEARN NEW TRICKS IN THE OLD WORLD

It's testing its high- and low-end strategy on a grand scale in Europe

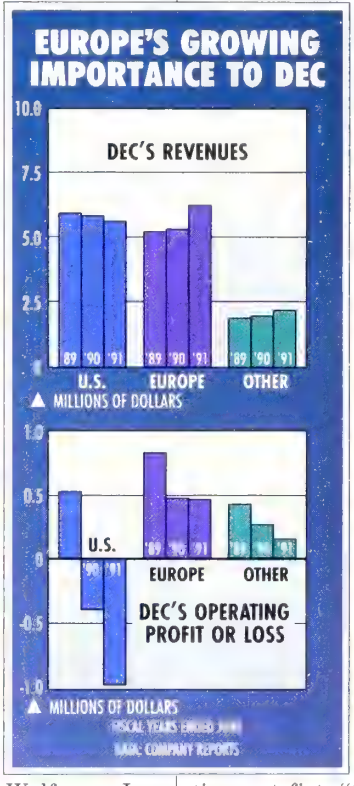
Since spring, Digital Equipment Corp. has trumpeted a new sales strategy to combat shrinking profits: no-frills for the price-conscious, and lots of pricey service for clients who can afford it. So where's DEC giving the plan its stiffest test? The same turf staked out by Japan's big-computer makers for their first export drive—Europe.

The U. S. minicomputer maker's Nov. 11 acquisition of Philips Electronics' $1 billion minicomputer business is the new strategy's linchpin. The $160 million deal promises some big new bank customers and a much-needed outlet for DEC's low-priced machines. Small businesses that own Philips' minis will now find themselves getting pitched hard on DEC's.

TWO-PARTER. DEC now gets more than half of its $13.9 billion in sales from Europe (charts). The company plans to split the Philips business into two equal parts. Its current European sales force will pick up Philips' banking clients, including such hefty names as Holland's Rabobank.

More intriguingly, the other half of Philips' mini business will form the core of a new unit focusing on sales to small business. DEC will be trying to form a "mean and lean, dynamic" sales operation, says Wolfgang Jaeger, a director of the new unit, Digital Equipment Enterprise.

If all goes according to plan, DEC says DEE will serve as a model for how it will sell workstations, personal computers, and other low-profit machines around the world. DEE will be run with fewer managers and sell mainly through small companies that tailor computers for business customers. Says Peter J. Smith, DEC's European vice-president of sales and marketing: "The way we're handling the DEE business offers substantial growth for us."



DEC's sales have advanced steadi but profitability—especially in t U. S.—has suffered because DEC has been able to match its rivals' lower op ating costs. President Kenneth H. Olse 65, earlier this year told managers would pay personal attention to findi a way to succeed where DEC hadn't b fore. "Before I retire," Olsen said, want to prove we can be in the commo ity business and be very profitable."

LABOR DAZE. DEE figures to serve more than just a test vehicle toward th goal. It starts with a r spectable 17% stake Europe's $7 billion ma ket for small compu ers. By combining DEC existing small-busine operation with the Ph ips business, the subs iary immediately boas a work force of 5,5 and annual revenues about $1.2 billion. Th makes sales per e ployee nearly doub DEC's current rate $120,000.

Analysts don't expe DEC to break even the Philips deal befo 1993. For one thin Philips piled up years losses on minis. Th there are the unions, new challenge for no union DEC. Many DEC's new workers a covered by strong j guarantees, so elimina ing jobs will have come through negot tion, not fiat. "Otherwise they will fai says Jos Hermus, a Dutch union org nizer. Jaeger vows that the company w abide by whatever choice its new wor ers make.

Learning to deal with unions m prove as tricky as the vagaries of selli low-cost computers. But if DEC's Europ an managers succeed with the low-co approach, they'll be teaching a lot folks back in the U. S. about how compete with the ultimate low-cost su pliers, the Japanese.

By Gary McWilliams in Boston, wi Patrick Oster in Brussels

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PEOPLE

BIDDING PARIS ADIEU: AUCTIONING POLO'S ARTWORKS AT THE GEORGE V

STILL LIFE WITH $100 MILLION

International fugitive Roberto Polo is alive and living well in Miami

The question *tout le monde* was asking at Paris' elegant Hôtel George V on Nov. 7 was this: Would Roberto Polo make a dramatic appearance? The Cuban-born financier, art collector, and international fugitive had disappeared from view in 1989, when he skipped bail in Italy. But French auctioneer Ader Tajan was to sell off the last big lot of valuables seized from Polo's apartments, including a porcelain-mounted jewel casket once owned by Marie Antoinette. Many suspected Polo might show up to bid his treasures adieu. But he was nowhere to be seen.

Polo was tucked comfortably away in Miami, where he has lived since September, 1990. Compared with the mid-1980s, when Polo, now 40, was the toast of the art world, jetting between residences in New York, Paris, Geneva, and Monaco, his new life is a quiet one. Indeed, his whereabouts have remained a mystery to most of the world.

But in Miami, Polo is scarcely in hiding. Society matron Ann Eisenhower remembers spotting him last February at a fund-raiser. He is a regular at the city's fashionable YUCA (Young, Upscale Cuban-Americans) restaurant and even has an appetizer named after him: Polo croquettes.

Just what is Roberto Polo up to? Seeking "solace and peace of mind," he says, the onetime art student has become an artist again. One of his silk-screen works hangs at YUCA. But Polo says his real vocation is extracting himself from the legal troubles that have dogged him since 1988. "I'm in America now, which is a free country. I'm going to prove my innocence."

That will take some doing. In 1989, a U. S. District Court in New York entered default judgments against Polo, ordering him to pay $124 million to clients who say he dipped into their accounts to support a lavish lifestyle. Since then, valuables seized from Polo's apartments have been auctioned to pay off creditors. Switzerland in 1988 brought criminal charges against him on behalf of the same clients, and a warrant for Polo's arrest is outstanding there. Extradition papers have not been filed in the U. S., but a Swiss Ministry spokesman notes that a U. S.-Swiss treaty in the works would make it easier to return him to Switzerland. Meanwhile, Polo says the Internal Revenue Service is seeking more than $100 million from him. He will contest that at a civil trial scheduled for la 1992. Polo's lawyers say that case w give him the "opportunity to clear h name and the record."

ROBERTO POLO: WILL HE PONY UP?

Many of Polo's assertions sound like novel of international intrigue. Polo co tends he was framed by enemies—i particular, Alfredo Ortiz Murias, a fo mer employee, now dead, who he clai acted out of jealousy. Polo's wife, Ro was in cahoots with Murias, he sa Rosa, from whom Polo is seeking a vorce, declined comment. The only re son U. S. courts ruled against him, Po says, is because he was jailed in Ita and couldn't defend himself.

TWISTS AND TURNS. On some poin however, Polo seems able to rebut acc sations leveled against him. Although vestors contend Polo wasn't given pe mission to invest in art, Polo says was. To fortify his point, he offers application to register with Swiss a thorities as an art adviser and investo A lawyer for the plaintiffs says tho documents don't pertain to his clients.

All in all, Polo's narrative often a pears to take twists and turns to suit t moment, often in an appeal for symp thy. He complained to BUSINESS WEE that Rosa visited him only once in h five months in Italian jail. (Before t courts released him on bail, he ha starved himself down to 85 pounds.) A ter Rosa's brother, Federico Suro, cha lenged Polo's account of the visits, t fugitive corrected his tale. He now sa she visited weekly—but only at his pa ents' insistence. Says Suro: 'There's rea ity, and there's his reality." Polo says h has a fine grip on reality.

These days, he also has a grip on paintbrush. Polo has been doing larg scale, mixed-media work and says Florentine art dea er Luciano Paladini feels th pieces "should sell fo $75,000 to $100,000 apiece Paladini confirms that seve al galleries have expresse interest but says he has n idea what the work migh bring. Should they fetch eve a fraction of the prices Po mentions, investors are su to come knocking. Robert Reger Jr., a lawyer for man Polo creditors, says plaintiff have netted only 25¢ on the dollar so fa "The [court] judgment is good for 2 years," he says. "We can continue t pursue him until there's satisfaction fo the entire amount." If so, Polo will b painting for much more than his ow peace of mind.

By Andrea Rothman in New York an Gail DeGeorge in Miami, with burea reports

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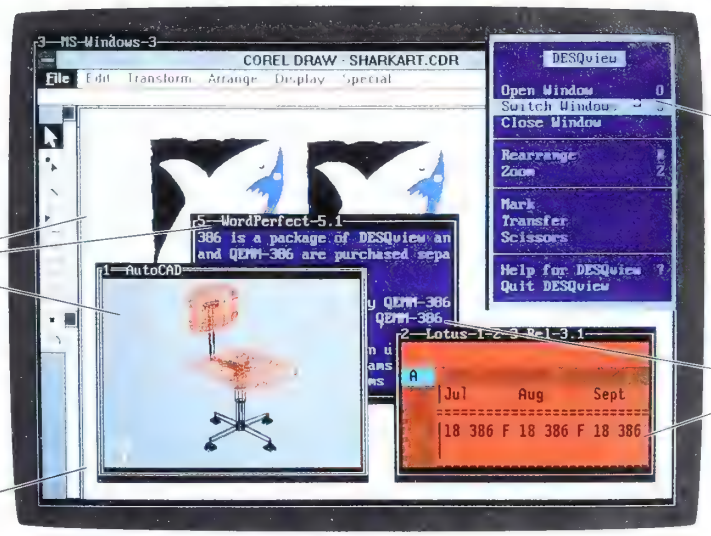

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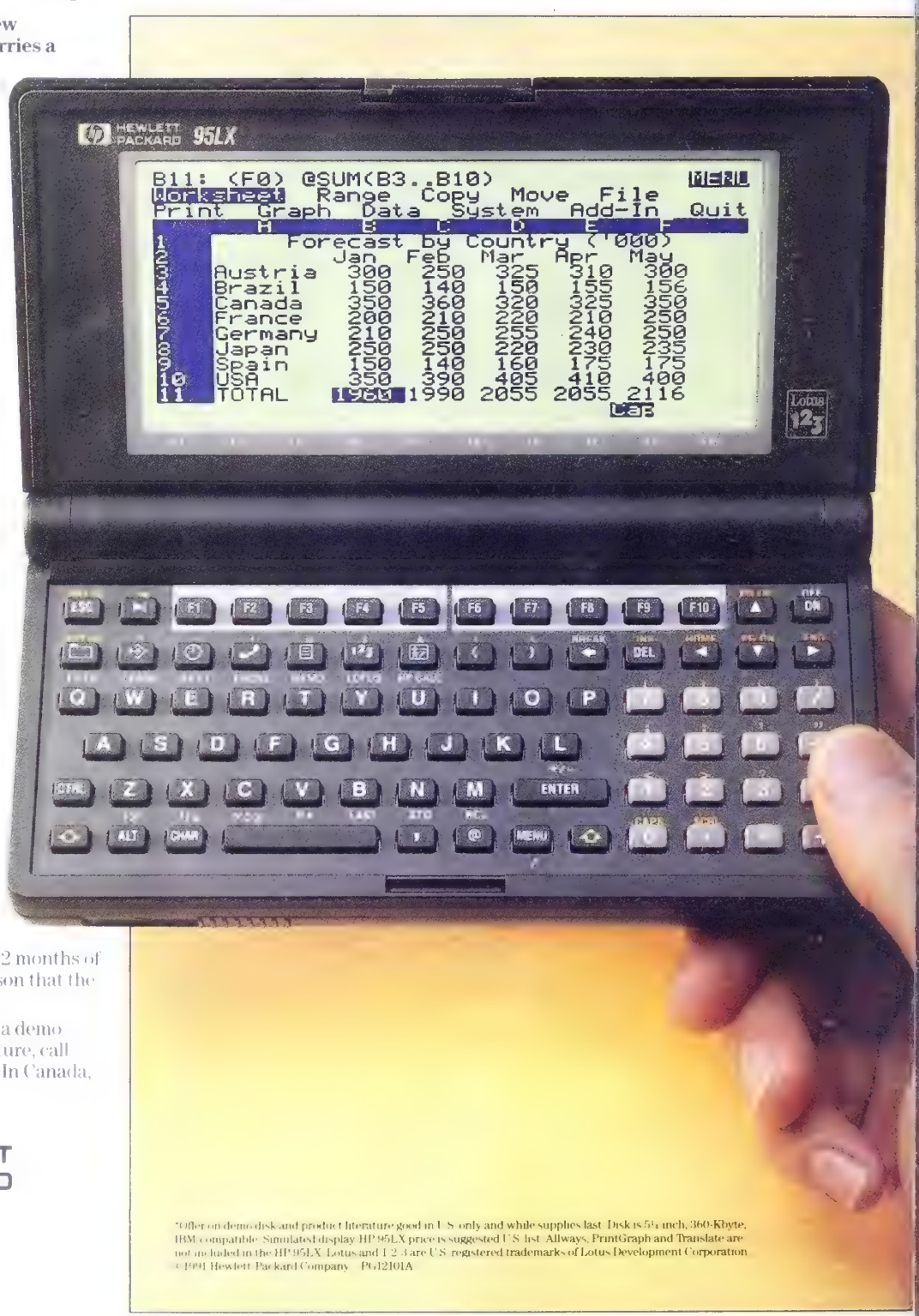

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BY HARRIS COLLINGWOOD

EVING IN IC

vin "Magic" Johnson's ing disclosure that he ontracted the HIV virus really sunk in yet, but perts and AIDS activists ready debating how best e his broad appeal to AIDS. Most applaud on's plans to preach a ge of "safe sex" to people. "He can speak heterosexual and black ation," says media con- t Tony Schwartz. activists also hope that os Angeles Lakers star ress for more govern- research funding. "He's o go to Congress and a lot of hands," says st Larry Kramer. gic has already had an t: Fox Broadcasting said ov. 12 that it would air or condoms. And Con- whose sneakers Magic ses, has launched an IDS ad campaign.

WON'T PAY FOR FORMANCE YET

e of America's most cele- d labor innovations just ut on hold. In its first iated pact with the Unit- ed Auto Workers, General Motors' Saturn unit agreed to put off an innovative plan tying pay to the small-car company's results.

Pay-for-performance fell victim to Saturn's low-speed launch. Output in the 1991 model year was only 50,000 cars, a third of original projections and well below the plant's 240,000 capacity. With the assembly line limping along, union leaders persuaded Saturn management to phase in over four years a provision that links pay to productivity and quality. Still, the new contract retains virtually all of the teamwork provisions drawn up in the company's original 1985 labor agreement.

BANKERS TRUST BIDS FOR INTEGRATED

▶ The tortured saga of Integrated Resources may be drawing to a close. On Nov. 12, Bankers Trust said it had reached a tentative agreement to purchase the junk-plagued real estate syndicator, which filed for bankruptcy 18 months ago. Bankers Trust is offering $565 million, up from the $526 million it bid last June.

Two creditor committees, representing about $1.4 billion in Integrated debt, have approved the offer, but the deal still requires court approval. And the bank's bid may have competition. People familiar with the deal say Chicago's Pritzker family has expressed interest in the company.

WHEN PRINCE CHARMING HAS A RAP SHEET

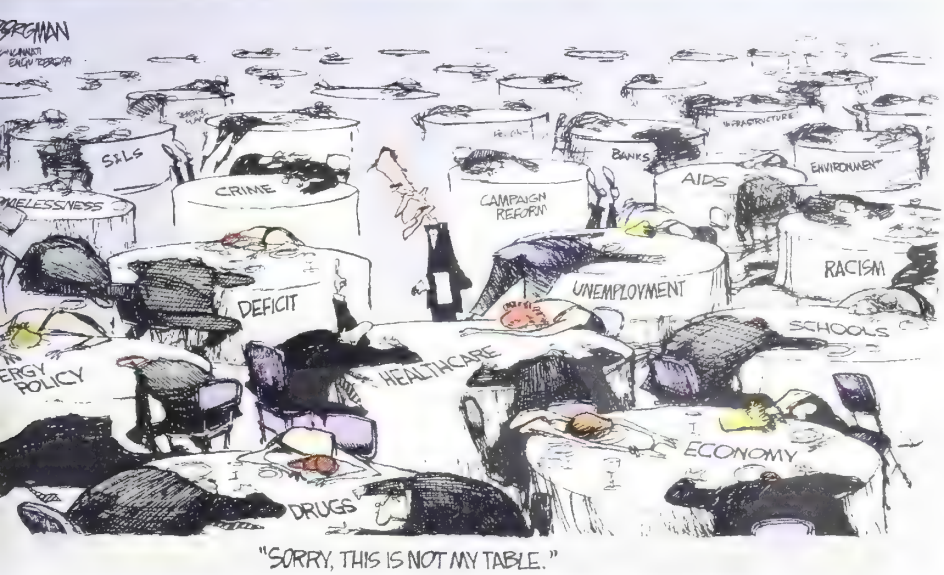
Perhaps all those made-for-TV movies are to blame. You know the plot: Young widow meets dreamboat. He seems like perfect husband material until she discovers what the viewers have known all along: He's a creep, with a long record of criminal fraud—or something worse—in his past.

It seems that such deception isn't just a staple of prime-time drama—it's real life. Or at least that's what former New York City Police Dept. detectives Tim Bartlett and Jerry Palace are betting. They're starting Check-a-Mate, a nationwide network of private eyes. Their primary job: making sure that prospective spouses are "not bankrupts, not ex-convicts, not child molesters, not rapists, not anything—in fact—that would be an obstacle to a happy relationship." What if those "obstacles" are real, and your Mr. Right turns out to be Mr. Dead Wrong? Well, you can always sell your story to Hollywood.

MINNESOTA MAY GIVE AL CHECCHI A BIG CHECK

▶ Northwest Airlines chief Al Checchi landed one deal and bowed out of another. On Nov. 11, the state of Minnesota tentatively agreed to a $740 million financing package. Northwest will use $350 million of it to construct two maintenance bases in the state. The rest goes into Checchi's war chest. The likely target: Continental Airlines.

Highly unlikely target: Midway Airlines. On Nov. 13, Northwest announced that it wouldn't buy the bankrupt carrier because Midway had overstated its revenues. Midway denies the charge, but in any case, it probably won't remain aloft much longer.



"SORRY, THIS IS NOT MY TABLE."

SONY LAYS SOME BAD BREAD ON *DANGEROUS*

▶ If Michael Jackson's first album since his 1987 monster *Bad* isn't a hit, don't blame Sony. The company's Epic Records label, which will release Jackson's *Dangerous* album on Nov. 26, is giving it a sendoff worth an estimated $20 million. Included in that total is an 11-minute video by director John Landis that features *Home Alone* star Macaulay Culkin, *Cheers* barfly George Wendt, and cool kid Bart Simpson. The video will play twice on Fox's network, once as part of a 30-minute Jackson special. Now, all *Dangerous* has to do is sell.

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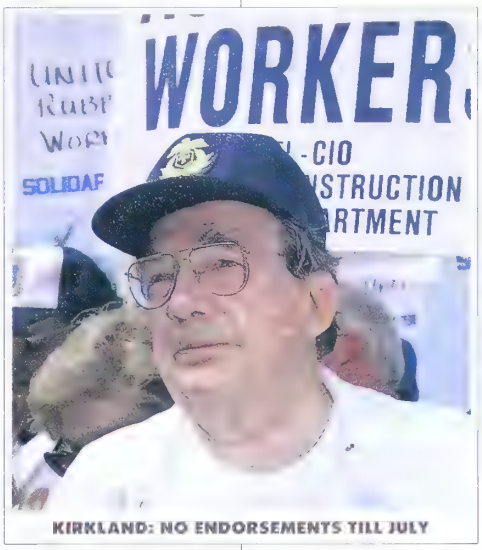
EDITED BY STEPHEN H. WILD

ILL LABOR BE 1992'S OMEBACK PLAYER OF THE YEAR?

was an intoxicating time for labor as the AFL-CIO met in etroit on Nov. 11-14. President Bush, wounded by a sag- ng economy, is dropping in the polls. Democrat Harris L. ord credited labor for playing a key role in his upset y in the Pennsylvania Senate race. And labor's issues— n care, the middle-class squeeze, unemployment bene- have caught on with voters. Labor politicos, long on the le of Presidential politics looking in, are thinking that may be their year.

e enthusiasm may be a bit prema- After all, the public is showing sing distaste for the sort of insid- olitics epitomized by Big Labor. of the Democratic Presidential dates are painting themselves as lers, ready to attack the mess in ington. And only the giddiest la- ol hearing all six declared Demo- at the convention could overlook act that all but Senator Tom Har- f Iowa strike a moderate tone.

LDEN. Even so, labor still has a lot er a Presidential contender. In this tarting campaign, no candidate ut together an effective field orga- on. And fund-raising is way be- schedule. Labor can help with both ems—providing foot soldiers, e banks, and a flood of PAC money. ion pols also hope that the shift in the political focus back rd the sort of domestic social issues that labor backs will the sting out of the charge that the AFL-CIO is just er special interest. "Our enemies have always said that s are out of touch with the rank and file," says Janice ance, political director of the American Federation of rnment Employees. "Now, we have shown that labor s not just for its members but for the entire middle " Adds Albert Shanker, president of the American Federation of Teachers: "Labor's endorsement may cost some votes, but no one is saying: 'Don't give it to me.' "



KIRKLAND: NO ENDORSEMENTS TILL JULY

The AFL-CIO is unlikely to endorse a candidate before the Democratic convention next July. Instead, President Lane Kirkland will urge the election of as many labor-affiliated convention delegates as possible. This approach ensures that labor doesn't commit early to a loser and that the nominee will owe something to the unions. "In a way, we're lucky we don't have a candidate we are obligated to support," says George Gould, political director of the National Association of Letter Carriers.

If labor went with its emotions, Harkin would be the choice. But strategists, who want a winner, worry that the Iowa populist may be too liberal. "Our hearts tell us one thing and our heads another," says one labor operative.

Unions would jump in a second for New York Governor Mario M. Cuomo if he takes the plunge. Meanwhile, many are intrigued by Senator Bob Kerrey of Nebraska. His youth and distinguished Vietnam war record appeal to many laborites. But Arkansas Governor Bill Clinton's smooth performance in Detroit made a better impression than Kerrey's stilted delivery. The other declared candidates—former Massachusetts Senator Paul E. Tsongas, Virginia Governor L. Douglas Wilder, and former California Governor Jerry Brown—are nonstarters in the labor crowd.

The AFL-CIO is basking in the embrace of the Democratic candidates. But if voters continue to rage at the political Establishment, challengers won't want to be identified too closely with labor's agenda. That means that next year, candidates may be handling the unions with asbestos gloves.

By Susan B. Garland in Detroit

TAL WRAPUP

WHITE HOUSE

ecriminations abound over Presi- dent Bush's sagging poll numbers the embarrassing defeat of Dick rnburgh in the Pennsylvania Sen- race. And the wrath of Republicans nd out of the Administration is ed squarely at White House Chief taff John H. Sununu and Budget ector Richard G. Darman. "It's ing but Darman and Sununu in- dating everybody," grumbles one or White House aide. "Anybody speaks up gets their head chopped " Adds another GOP strategist: e White House has turned the do- tic agenda over to two guys who know 16 blocks of Washington and think they know politics."

Darman and Sununu teamed up with Treasury Secretary Nicholas F. Brady to put the kibosh on plans for a quickie tax cut this fall. Now, insiders say, the duo is discouraging talk of new domestic initiatives until January's State of the Union speech. Then, the Administration will unveil its own tax and health care proposals. The President seems committed to waiting. "I like to handle these things in an orderly way," he said at a recent meeting.

Trouble is, many political aides see the risks of inaction as large and growing. A new Times Mirror poll shows Bush's approval rating down to 55%—20 points below last spring's readings. Bush runs a dead heat against an unnamed Democratic challenger, though he beats all the big names.

The White House isn't totally ignoring the unhappiness with Bush's lack of a domestic program. Except for his delayed tour of Asia in December or January, the President plans no further foreign travel in the first half of 1992. And in what may be a sop to action-hungry conservatives, Bush has allowed Housing Secretary Jack F. Kemp to continue criticizing the decision not to seek a tax cut this year. But these modest steps won't be enough to calm growing GOP jitters. Watch for the infighting to intensify.

No one will solv

That's why the smar

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A NEW WORLD ORDER FOR U.S. ARMS MAKERS

Foreign customers are eager to buy what the Pentagon cannot

Christmas came early this year for Raytheon Co., the maker of the celebrated Patriot missile that blasted Iraqi Scuds out of the skies during the gulf war. In mid-November, it received the White House's blessing for a $3 billion sale of 14 Patriot missile systems to Saudi Arabia. For the Lexington (Mass.) company, the deal came just in time. Declining orders for Patriots from the U. S. Army, which generates nearly 15% of the company's revenues, already have contributed to 3,300 job cuts this year.

Raytheon's plight highlights the growing dependence of U. S. defense contractors on foreign markets. Without exports, U. S. military spending cuts would likely end production of McDonnell Douglas Corp.'s F-15 fighter, General Dynamics Corp.'s M-1 Abrams tank, and other heroes of Desert Storm. Arms exports have traditionally accounted for 12% to 15% of nonnuclear U. S. arms production. But as cuts in the Pentagon's budget become more drastic, exports could easily jump to 25% of production by the end of the decade. Although overseas demand won't be enough to prevent a major restructuring of the U. S. defense industry, "foreign sales will be key to determining who shrinks and how much," says Joel L. Johnson, international vice-president of the Aerospace Industries Assn. based in Washington.

If, for example, McDonnell Douglas is forced to close down its F-15 line in St. Louis, some 7,000 employees and several thousand subcontractors will be out of work. "We see increases [in foreign sales] as the primary way to keep open product lines," says Tom Culligan, a McDonnell Douglas vice-president. Hard times are already forcing the company to consider selling up to 40% of its commercial airline business for $2 billion, possibly to an Asian buyer.

BIG SPENDER. It's mainly Middle East purchases that are giving U. S. arms manufacturers a boost (table). Despite the victory over Iraq and the budding Arab-Israeli peace process, the oil-rich gulf states and their neighbors remain wary of each other—and eager to strengthen their military muscle. Over the next five years, buyers in the region will spend upwards of $50 billion tanks, fighter planes, missiles, and oth weapons, says Paul Nisbet, an aerospa industry analyst at Prudential-Bache curities Inc. in New York. Much of will be spent in the U. S.

The bulk of those sales could co from Saudi Arabia, the region's bigg spender. Aside from the Patriots, yadh is ready to plunk down more th $4 billion for 72 F-15 fighters and $ billion for M-1 tanks. The United Ar Emirates is prepared to spend $5 bill on new weaponry, according to indust sources. The U. A. E. currently is cussing a possible purchase of 337 M tanks and is shopping for more figh aircraft, possibly F-15s. And Kuwait v spend billions to rebuild virtually its

WASHINGTON WILL LET THE SAUDIS BUY PATRIOTS FOR DEFENSE BUT WORR THAT SALES OF THE F-15 COULD COMPLICATE THE QUEST FOR MIDEAST PEAC

GLOBAL SHOPPERS FOR U.S. ARMS

These countries are spending—or hoping to spend—billions on U.S. weaponry

* Estimates for prospective deals

DATA: BW

EGYPT		
GENERAL DYNAMICS	46 F-16 fighters	$1.6
KUWAIT		
McDONNELL DOUGLAS	36 F/A-18 fighters*	1.6
RAYTHEON	6 Patriot systems*	1.0
GENERAL DYNAMICS	200 M-1 tanks*	0.7
SAUDI ARABIA		
McDONNELL DOUGLAS	72 F-15 fighters*	4-6
RAYTHEON	14 Patriot systems	3.0
SOUTH KOREA		
GENERAL DYNAMICS	Co-manufacture of 120 F-16s	$2.5
LOCKHEED	8 P-3 antisub planes	0.8
TURKEY		
GENERAL DYNAMICS	80 F-16s, plus spare engines	2.8
UNITED ARAB EMIRATES		
McDONNELL DOUGLAS	26 F-15 fighters*	3.0
GENERAL DYNAMICS	337 M-1 tanks*	1.2

defense establishment. At the top of ish list: 200 M-1 tanks, more Patri- and 36 F/A-18 fighter planes. Israel, e buying power is dictated by U. S. gn aid, wants more Patriots and million worth of surplus U. S. s and artillery.

t arms sales to this heated region political problems for President , who is championing arms control e Middle East. Except for Patriots, h are viewed as purely defensive ons, the White House is loath to ve more big arms sales until at next year. U. S. officials fear that orders could torpedo the tentative -Israeli peace process.

ile Arab buyers quietly are making shopping lists known, they face op- ion from pro-Israeli members of ress once they go public. Says Tony esman, a national security specialist aide to Senator John McCain (R-): "Many of the gulf states are very tant to make a formal request to U. S. because they fear having to d [it] in public and in Congress."

KING UP. If the backlash forces ington to keep deals on hold, Mid- East buyers may opt to do their ping in Europe. It has happened be- In 1985, stung by Washington's re- to sell F-15Es, Saudi Arabia signed 8.7 billion deal with Britain that in- d 72 Tornado fighters and 30 Hawk rainers. The Arabs would prefer to American weaponry because of its record during the gulf war and use they're counting on U. S. rein- ement in case of future attacks.

t the Middle East is far from the area stocking up on U. S. weapons. Asian countries, anxious about ington's plans to withdraw troops the region, are spending briskly. e prospective purchases won't get close scrutiny in Washington. heon is peddling Patriots to South a. Grumman Corp. is hawking re- al surveillance planes to Indonesia, ysia, and Thailand. Grumman has teamed up with Lockheed Corp. in ttempt to interest Japan in a longer- e surveillance plane. Even Finland oking to upgrade its air force—it s to spend $2 billion on 60 planes.

ian buyers increasingly prefer tech- gy-sharing arrangements to off-the- deals for cash. Korea, for example, a deal to license or co-produce 120 F- with GD. "In the long run," warns lie J. Goldring, senior analyst at the nse Budget Project, a Washington k tank, "we may be creating the generation of competitors." But for r-starved U. S. contractors these , any business is good business.

By Amy Borrus, with Seth Payne in ington, James E. Ellis in Chicago, Geoffrey Smith in Boston

JAPAN

JAPANESE VCRs SWITCH INTO SLOW MOTION

But souped-up new models may regain share lost to Asian rivals

In just a few months, the videocassette recorder will turn 20. But don't expect a birthday bash in Japan for this boxy contraption that has revolutionized home entertainment.

Instead, the world's leading producers of VCRs are busy brooding over a different milestone: the 30th straight month of shrinking sales at home. Total VCR shipments in Japan this year will barely top 4.5 million, down from a high of 7 million in 1988. Forecasts for next year are worse. The reason: 80% of Japanese households already own a VCR.

On top of that, the Japanese face stiffer competition in the U. S., the world's biggest VCR market. Despite the recession, Americans are snapping up more than 1 million VCRs a month—but are opting for low-end models from South Korea and Southeast Asia. Japanese VCRs now make up only half of U. S. sales, down from two-thirds last year. "Competition overseas is excruciating," says Tamotsu Harada, an official of Japan's Electronic Industries Assn.

To squeeze the last drop of profit from aging VCR technology, Japan's consumer-electronics giants are rushing out newfangled models to match every whim—and more. Sanyo, JVC, Toshiba, Hitachi, and Matsushita have timed their moves well. The latest versions are coming out just as Japanese workers are pocketing hefty yearend bonuses. If they're winners at home, the new VCRs could hit the U. S. market next year.

> In the '80s, Japan made 'serious money' from VCRs, producing about $10 billion worth a year

These razzle-dazzle models don't come cheap. Toshiba's entry is a double-deck VCR that can record or play for 16 consecutive hours—vs. a maximum of nine on most machines. The price: $1,330. Matsushita Electric Industrial Co.'s $1,230 machine is ideal for collecting successive episodes of TV shows on the same tape. In a new twist, viewers program a blank tape to record a show, using a simple bar-code device. After that, just pop in the tape, and it sends out the recording instructions.

UNSNARLED CORD. That's just the beginning. Live in a cramped apartment? Hitachi Ltd. is planning a compact version only half as wide as existing models. Tired of those spaghetti wires entangling your TV? Matsushita engineers are working on a wireless VCR that will send audio and video signals to the TV via infrared controls. A music lover? Victor Co. of Japan (JVC) has a VCR that performs all the usual functions and also makes near-perfect digital recordings of satellite radio broadcasts, which kicked off in Japan last March. And the sound quality matches a CD.

There's even one for sports fanatics

ROB DUNLAVEY

who are too busy to watch an entire game. For $1,150, Sanyo Electric Co. offers a VCR that enables fans to monitor an event in audio, as they fast-forward through the tape. Special circuits pluck out sound bytes spaced six seconds apart and play them at normal speed. Exotic? Indeed. "But does anybody really need it?" quips one competitor.

Even if the gimmicks bomb, Japan's VCR makers can't expect much sympathy. They've already wrung extraordinary profits from this single technology: Throughout the '80s, Japan's manufacturers produced an average of $10 billion worth of VCRs a year. "They've made some serious money," says Nizam Hamid, an analyst with UBS Phillips & Drew International Ltd. in Tokyo. And there are still big bucks to be made in developing countries. Millions of consumers in India, Africa, and South America have yet to catch the first wave of video technology. Hamid also expects to see Japanese low-end-VCR plants sprouting up in Eastern Europe soon.

What's more, Japanese electronics makers are convinced that high-definition television (HDTV) will create demand for a whole new generation of VCR technology. Japan's global HDTV push remains hobbled by the lack of international standards. But that won't crimp production of new recording devices. Just take JVC. Earlier this month, it started supplying special VCRs to Thomson of France for that company's unique wide-screen TV sets. The Japanese may not create all the high-definition images in the future, but they're set on having their VCRs be the first to record them.

By Neil Gross in Tokyo

GERMANY

THE GREAT GERMAN AUCTION IS LOOKING LIKE A PRIVATE SALE

Foreign bidders claim that the deck is stacked against them

A name such as Sheraton or Inter-Continental should carry some weight in the bidding to take over one of eastern Germany's most alluring state-owned properties, the 33-unit Interhotel lodging chain. But these and other hoteliers seem destined for disappointment. Despite a worldwide effort to boost foreign investment in the region's reconstruction, government insiders say Bonn appears set to hand over the hotel group for $1.6 billion to Sixt, a fast-growing German rent-a-car chain with all the right connections.

The Treuhandanstalt, the state agency privatizing the former East German economy, won't confirm a decision has been made. "I know [the winner], but I won't say," says Treuhand President Birgit Breuel. But already, foreign investors are complaining that the deck was stacked against them from the start. Such talk may only heighten feelings that the Berlin-based Treuhand is keeping its best assets for the German business elite. Indeed, of the 3,800 companies sold by the Treuhand since 1990, more than 90% have gone to Germans. Only 17 companies have gone to U.S. bidders.

'WE WERE MISLED.' Interhotel would seem a great buy for a global hotel group. One of the few profitable companies in the former Communist state, it operates the majestic Grand Hotel in Berlin and controls 40% of the region's hotel rooms. When Interhotel went on the block last year, more than 200 investors lined up. Among them was Berlin's Klingbeil Group, which offered to spend $2.4 billion to fix up Interhotel. It had signed up Inter-Continental, Ramada Inn, Sheraton, Marriott, and Holiday Inns to run the properties. But Munich-based Sixt apparently prevailed, even though it lacks any hotel experience. Says Alfred Weiss, general manager of hotels for Klingbeil: "We were misled."

Sixt insists that its bid will give the Treuhand more of what it wants, largely job protection for the chain's 7,500 workers. Sixt promises to keep all of them and will permit the group's managers to continue running their hotels. "We have trust in these people," says Sixt CFO Manfred Sturm. But others say it was Sixt's founder, Erich Sixt, who actually made the deal click.

Over the past decade, Sixt, 45, has turned a modest car-rental company in Germany's market leader, with $750 million in annual sales. Along the way, he made valuable connections with Bavarian bankers. Now, several of them, including Bayerische Landesbank and Bayerische Vereinsbank, want to take stakes in Interhotel alongside Sixt in hopes of taking the group public in the mid-1990s. Sixt also has had dealings with S. G. Warburg & Co., the London-based investment bank that advised the Treuhand on Interhotel's sale. Among other things, Warburg underwrote part of a stock offering for Sixt in 1986. But Warburg notes that it hasn't provided any other services to Sixt since then. The Interhotel sale "was handled in the most scrupulous manner," says Warburg Director Piers von Simson.

THE TREUHAND'S BREUEL AND INTERHOTEL'S BERLIN SHOWPIECE: DID SIXT HAVE AN EDGE?

The sale has left prospective bidders for other Treuhand assets scratching their heads. "We have 2,000 investors waiting to negotiate with us," says Breuel. "We need international management experience." She may have to try harder if she really wants outsiders to join the game.

By Igor Reichlin in Bonn, with Mark Maremont in London and William Glasgall in New York

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And time to market goes down, as it did with Dodge per. We'll take Viper from show car to showroom in less an three years. No U.S. car company has ever done it that t. It will be the new standard against which we will mea- re ourselves.

That's the platform team way of building cars. That's the y Chrysler will build the quality America needs, and get it America faster.

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Dodge Viper, with all its 400 horses, will be out early next year. Then a new Jeep® Grand Cherokee. And next fall, the new family sedans from Dodge, Eagle and Chrysler. They're built on the cab forward concept. A new restructuring of the family sedan providing the owner with more room, better ride and handling in the same size car. A concept that makes so much sense it will become the standard for the 90's.

In the years to come we'll have a revolutionary new full-size pickup, new small cars, new compacts, and a new minivan.

The Tech Center will let us assemble the finest automotive talent and technology, put them together under one roof, and build the kind of cars the public will demand, in this decade and the next century.

That will make Chrysler more competitive.

That will make America more competitive.

That will make our customers more satisfied.

Lee Iacocca

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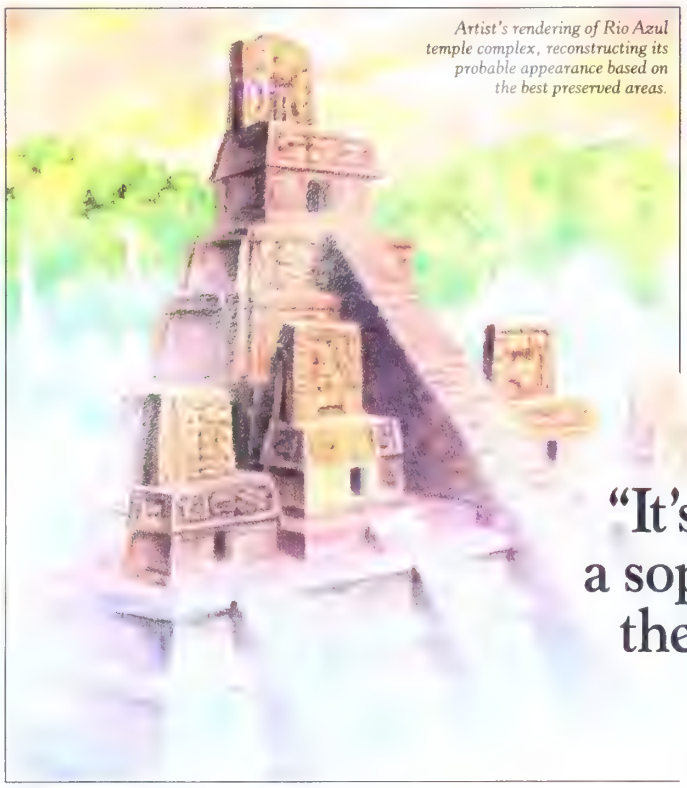

Artist's rendering of Rio Azul temple complex, reconstructing its probable appearance based on the best preserved areas.

In the remote jungle of the Petén region of Guatemala, an intrepid band of archaeologists, led by Dr. Richard Adams, have unearthed the ancient Maya city of Rio Azul. Despite temperatures that rarely fell below 100 degrees Fahrenheit, humidity that hovered near 100 percent, and the thick tropical growth that impeded their efforts, Adams and his team were able to excavate a great deal of this two-thousand-year-old city. The result is new insight into a remarkable pre-Columbian civilization that predates both the Incas of South America and the Aztecs of Mexico.

The dig yielded a vivid picture of a highly advanced people who channeled rivers, terraced hillsides, and drained whole swamps, while converting hundreds of acres of dense jungle into arable land. The Adams' team discovered murals and carved stone monuments that recorded the history of the royal families. They also uncovered majestic temples as well as stone courts where the Maya competed in ritual ball games.

"The Maya fascinate us because they were so advanced for their time and place," said Adams. "They had a sophisticated writing, mathematical, and astronomy system; and they were skilled artisans, farmers, and builders. In short, they created a complex society in an extremely hostile jungle environment."

"It's an amazing story of a sophisticated people with the will to tame a jungle."

Dr. Richard Adams

Dr. Richard Adams with a governor's tomb mural at Rio Azul.

Given its inhospitable climate and inaccessibility, Rio Azul is an archaeologist's nightmare. Resupply is so difficult, Dr. Richard Adams must rely on whatever equipment he takes with him on a dig. That's why it's not surprising he wears a rugged Rolex Oyster Perpetual timepiece.

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EDITED BY STANLEY REED

ANCY FOOTWORK MAY BUY ITTERRAND A BIT MORE TIME

he surprise is that French voters didn't tire of François Mitterrand sooner. France's President now has ruled for than a decade—longer than Charles de le. Like *le Grand Charles*, Mitterrand s to grow more aloof and mercurial with But only after recession hit France last er did his approval ratings start to ge. They have kept on falling since he ed Edith Cresson as France's first woman nier last May to give new sparkle to his list regime. Instead, Cresson's acid style inability to revive the economy have ed voters. Now, Mitterrand, 75, is trying w ploy to regain popularity: He's hinting he may quit before his term ends in 1995. that gesture seems like the start of a eful retreat, it's not. Instead, it is part of y strategy to keep France's Socialists in r in the face of their stiffest challenge the right. But even if Mitterrand suc-s, he probably won't be able to prevent a centrist government from emerging. A market Europe and domestic troubles are ing France to the right. The chief rivals Mitterrand's Socialist mantle both are moderates: former e Minister Michel Rocard and Jacques Delors, president he European Commission. Either would privatize some companies and ease up on *dirigiste* economic policies.

FARMERS PROTEST LOW PRICES

-IMMIGRANT FEVER. Mitterrand's gambit is to build good- through a constitutional referendum late next year. It d cut the presidential term from seven years to five and nd Parliament's powers. By endorsing this popular idea, red by most opposition leaders, Mitterrand can pose as a ess statesman. But typically, he has been coy about ther the new term limit would apply to him.

hether he quits will probably depend on the political winds he moment. If they're blowing the Socialists' way, he might step down in early 1993, prompting a presidential ballot alongside parliamentary elections due then. Otherwise, he might try to hang on, waiting for better days.

As of now, the conservatives are coming on strong. Their hottest issue is an anti-immigrant fever—being fanned for all it's worth by the right's top presidential hopefuls, former President Valéry Giscard d'Estaing and Paris Mayor Jacques Chirac. The weak economy also helps them. Paris is alive with marching workers, and angry farmers are blocking roads to protest low prices and a feared subsidy cut. The right blames economic woes on state-owned industry, which accounts for 30% of gross national product. It also says that Mitterrand's reticence to privatize is crimping investment, hobbling France in an increasingly open-market Europe.

Polls show the leading candidates to succeed Mitterrand—the two Socialists, Delors and Rocard, and two conservatives, Chirac and Giscard—running evenly. But the right is way ahead for the coming parliamentary elections. Seeking help, the Socialists may team with centrist "green" parties, which would pull them to the right. Mitterrand might also replace Cresson with Delors, who could then prepare for a future presidential run.

Of course, Mitterrand has bounced back before. Currently, he's trying to recoup after several gaffes, such as not vigorously opposing the Soviet putsch last August. He scored well at the recent NATO summit, where George Bush approved his goal of a European defense force. And he hopes to bask in next month's European Community summit. But that won't be enough to erase growing doubts about whether Mitterrand is the right French leader for the post-1992 era. The days of his old-style socialism seem numbered.

By Stewart Toy in Paris

BAL WRAPUP

ROPE

A fight is brewing between the European Commission—which nts to slap restrictions on a broad ge of advertising—and big consum-companies, publishers, and ad agen-s. Brussels has already succeeded in ning tobacco advertising from TV wants to get it out of print media. o looming are regulations on liquor, , and toy ads. Among the groups nting back is the European Publish- Council, which represents some 100 he largest media owners. It is start- a Europe-wide newspaper cam-gn blasting Brussels for trampling free speech, among other things. But lost revenues may be a greater concern.

CZECHOSLOVAKIA

Corruption is sullying capitalism's reputation in Eastern Europe. In Czechoslovakia, black marketers and former Communist officials have outbid honest entrepreneurs for dozens of former state companies put up for auction. Indignation at such hijinks is now so high that Parliament has passed a law requiring investors to show that the money they pay for companies is "clean." Trouble is, no one, including Finance Minister Václav Klaus, is quite sure how to distinguish a dirty koruna from a clean one.

NORTH AFRICA

The European Community is turning its attention to such North African countries as Morocco, Algeria, and Tunisia. A summit in early 1992 in Tunis will bring together North African heads of state with the leaders of Italy, France, Spain, and Portugal. It is likely that the participants will launch a development bank for North Africa. The EC is attracted by the market represented by North Africa's 80 million people and big upcoming infrastructure projects. It also wants to head off new waves of North African immigrants by spurring local development.

SUSAN MAY TEE/SABA

THE POSTAL SERVICE

PUSHING THE ENVELOPE AT THE POST OFFICE

Postmaster Frank has made progress—but not enough for some

Postmaster General Anthony M. Frank looked grim as he stepped before the cameras on Nov. 5. The Postal Service Board of Governors had just killed his proposal to raise the first-class mail rate by 1¢, to 30¢, which would have increased annual revenues by $800 million. Frank had won six of nine votes, but changing the rate required unanimous approval. "I don't want to be overly dramatic about it," said a frustrated Frank. "But you can go to the electric chair on a 5-4 vote."

Such are the travails of trying to run the $48 billion Postal Service as a real business. When the former savings and loan executive became the nation's chief postman in March, 1988, he hoped to inject a dose of rational management into the sprawling, nearly unmanageable service. But despite making more progress than most of his predecessors, Frank, who is 60, has been sinking into the bureaucratic and political swamp of late. To make matters worse, the Bush Administration forced Frank to pick up a bigger portion of the service's retirement benefit tab. Meanwhile, growth in mail volume slowed, thanks to the combined effects of a 19% rate hike last February, the recession, and competition from express mail, private delivery, and fax machines. So a projected $900 million surplus for the year ended Sept. 30, 1991, is now a $1.6 billion deficit. And with rivals stealing more of its business, the service has to run faster and faster to stay in place.

PENNY WAR. Frank has had some success, particularly in enforcing the sort of tough cost control that eluded earlier postmasters. He also tamed labor, an area where his immediate predecessor, R. Preston Tisch, fell down. Resorting to binding arbitration this year, Frank beat back the service's major unions and won a four-year agreement that capped labor costs—which make up 83% of expenses—and gave management flexibility to hire temporary and part-time workers as it automates. Since 1989, Frank has trimmed 37,000 workers from the Post Office's 700,000-person payroll.

TONY FRANK'S ACHIEVEMENTS...

- Trimming the service's 700,000-strong work force by 12% by 1995
- Speeding mail processing with automated equipment
- Capped worker pay increases in 1991 and won flexibility on work rules and hiring of temps
- Hired outsiders to gauge delivery standards and customer service

...AND CHALLENGES

- Needs legislation to gain more control over rates
- Must replace a bureaucratic culture with a maleable one
- Must recapture market share from express-mail rivals
- Must rebuild flagging mail volume—especially third-class junk mail

And on Oct. 7, Frank announced pla to cut an additional 47,000 workers 1995, saving $4.5 billion a year by th "He's been one of the best," says Ri ard A. Barton, senior vice-president government policy at the Direct Mark ing Assn., which represents bulk m ers. Unlike many of his predecessors who sometimes moved in and out of job in a matter of months—Frank h gotten his hands dirty working for re change, winning kudos for being neith a political hack nor a postal-lifer.

But the postmaster may have reach an impasse, largely because the 19 Postal Reorganization Act, which w supposed to put the Post Office on more businesslike footing, fell far sh of its goal. The law is loaded with p tections designed to keep the servi from abusing its monopoly positi However, the law also made it difficu to respond to competiti threats from newer forms telecommunications. Post Service executives have n ther the freedom nor the countability of private-sect managers. "I'm the only C of a major corporation America who doesn't ha control over his own price Frank notes. Rate chang must be approved first by t President-appointed Post Rate Commission, then by t Board of Governors.

'WHIPPING BOY.' This u wieldy structure has force Frank to spend a good portio of 1991 fighting over a penn In January, the Postal Ra Commission cut his propose 30¢ stamp back to 29¢. An a noyed Frank went on t stump, describing the decisio as "dumb" and deriding th PRC for "only helping the co per miners of Chile." Suc open scorn alienated the pan and, despite a later apolog helped kill Frank's efforts t get the extra money now.

Frank understands that th job of running the easy-t criticize Post Office make him fair game for legisl tors—and anyone else—lool ing to make headlines. "Th public has to have a whippin boy, and the Post Office is pretty good target," say Representative William L Clay (D-Mo.), chairman of th House Post Office & Civ Service Committee.

Even efforts to bear th

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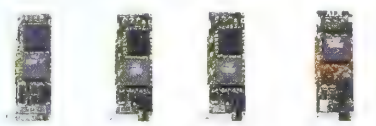

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lash with good humor can backfire. On Aug. 2, Frank did a stint on *Late Night with David Letterman*, overseeing the show's regular "viewer mail" feature and playing the silent straight man as Letterman poked fun at the service. But the appearance didn't sit well with some postal unions, already angry about cutbacks at the agency. "He stood there just like a potted plant," snipes Morris Biller, president of the American Postal Workers Union. Not long after Frank's appearance, Biller distributed "Wanted" posters bearing Frank's picture and the legend: "The most dangerous threat to USPS in history." Frank calls such personal attacks "unproductive."

Frank gets mixed reviews from politicians who oversee his agency, too. "He's a bit brittle" when it comes to criticism, says Senator David H. Pryor (D-Ark.), chairman of the subcommittee on federal services, Post Office, and civil service. "He doesn't do well with the give-and-take of politics."

OLYMPIC EFFORT. More important, Frank's innovations haven't always been a hit. He drew fire with a plan designed to stretch out mail deliveries in some parts of the country to ensure more consistent performance. The American Bankers Assn., for example, complained that the slowdown would cost banks $135 million annually in lost interest, because checks would take longer to clear. Frank, in response, says that market research had shown that customers wanted more reliable delivery even if it occasionally was slower. The agency is implementing the plan but has modified it in some areas to minimize the impact on banks.

> 'I'm the only CEO of a major corporation . . . who doesn't have control over his own prices'

Frank also has been slapped by Capitol Hill for his plan to spend $122 million to be a sponsor of the 1992 Olympic Games. He claims sponsorship will be a morale booster for workers and adds that the effort will make a $50 million profit, primarily through the sale of souvenirs and other Olympics-related postal items. But some critics expect the effort to lose money and worry that it will distract some in the Postal Service from their primary mission, delivering the mail. They also point out that a monopoly doesn't need such promotion.

Many CEOs have learned to expect public criticism over executive compensation, but here, too, Frank has special problems. Congress complained loudly when it learned that the Post Office handed out $20 million in bonuses to its managers during a three-year period in which the service lost $1.4 billion. Th Chicago unit, for example, lost $142 mi lion during that time—and got poor pe formance ratings—but 62 of its exec tives received a total of $503,298 i bonuses. Frank, who earns $99,500, say that his managers are underpaid an have less control than private-secto managers over financial results. Agree Norma Pace, the Postal Board of Gove nors' chairman: "Congress will alway find something to be critical about."

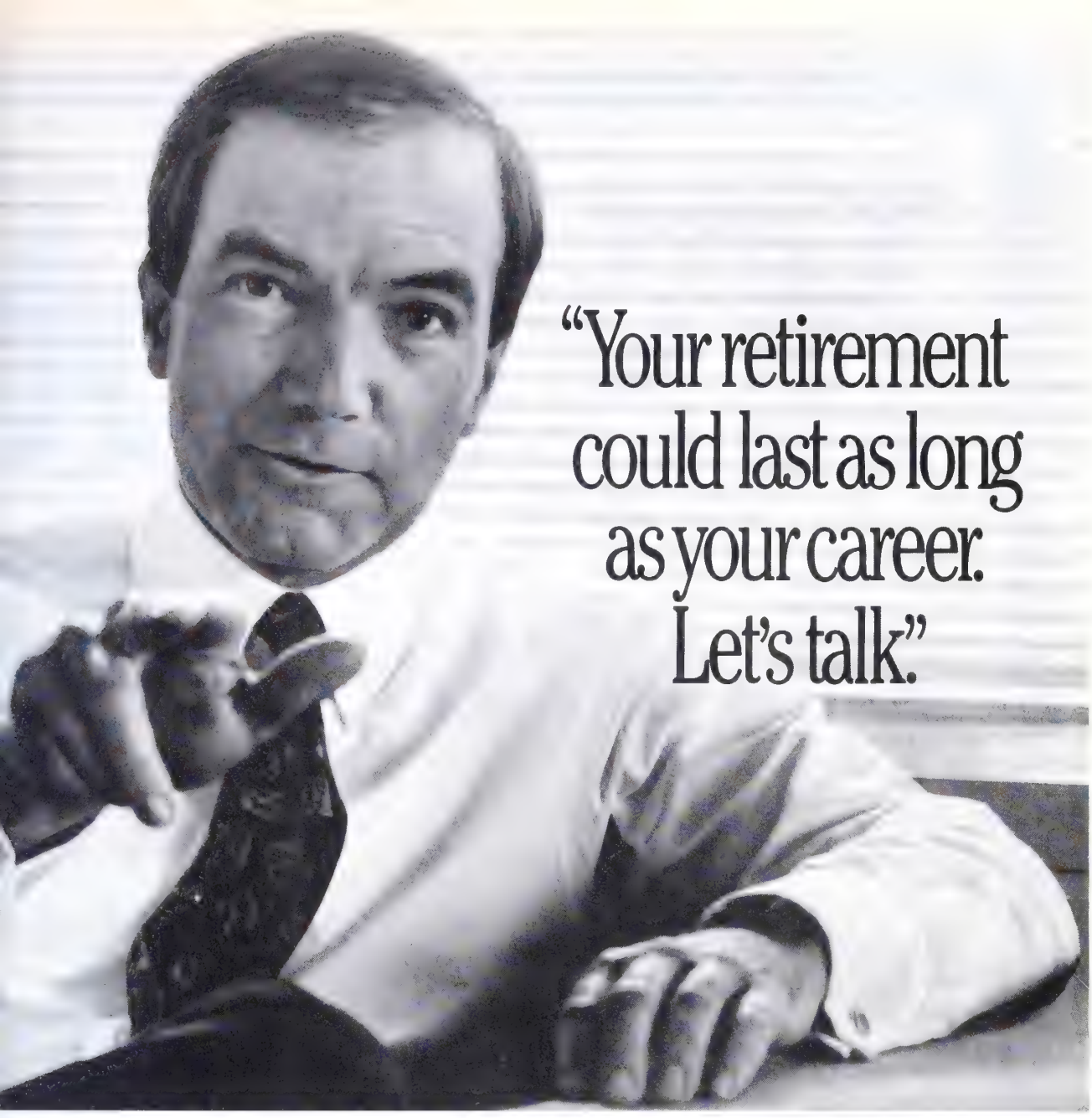
Frank has tried hard to improve se vice. He restored the window hours tha had been cut back by Tisch. He hire Price Waterhouse and Opinion Researc Corp. to monitor delivery standards an customer satisfaction. In the past, inte nal studies were often rigged to mak postal management appear far more e fective than it was. Better external me surements are making postal worker more competitive with one another an therefore more responsive to custome needs, Frank claims.

Meanwhile, he is trying out new way of serving customers. For example, th agency is testing th sale of stamps fro automated teller ma chines at banks. It' also trying to kee the maximum wai for window service t five minutes, an am bitious goal, expert say. But not all programs work smooth ly. Last year, Frank started sellin mugs, T-shirts, and other items bearin the postal emblem or stamps at post of fices. Frank says it brought in $15 mi lion in revenue and netted $3 millio Lawmakers immediately blasted th plan, saying that postal worker shouldn't be tied up selling knickknack Frank will use outside vendors to se postal merchandise in the future. "I just shows the high risks of doing any thing new around here," he says.

FRIENDLY WARNING. Frank probably won't be around to see all his effort pay off. When he signed on, he said h wouldn't stay beyond March, 1992. An there are signs he's getting ready t pack his bags. He was up for the top jo at the Resolution Trust Corp., but h withdrew. Now, he is thinking of accept ing a private-sector post in California.

Before he goes, he offers a word o advice to any corporate hotshot wh thinks that the Postal Service is just an other messed-up company that can b brought to heel. "I was told when started that this was the most frustrat ing job in Washington," Frank says. " haven't been disappointed."

By Mark Lewyn in Washingto



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Dee and Rick Ray make money while the networks scramble

THE RAYS AT HOME IN CHARLOTTE: STICKING TO REGIONAL GAMES AND BARGAIN RIGHTS

If you tune in to the North Carolina-Georgia Tech game on Feb. 2 in Atlanta, you could be watching more than just another couple of hours of college basketball: You could be witnessing the future of televised sports.

ABC stations will carry the contest, but the network won't own it or sell the ad time. Instead, that game and 25 to follow on ABC Inc.'s winter schedule will be the property of Raycom Inc., the nation's largest sports syndicator. And ABC, the landlord, is charging Raycom a remarkably modest rent.

FEW VIEWERS. The arrangement is ABC's attempt to deal with the poisonous economics that are slaughtering the Big Three networks' sports programming. CBS Inc. on Nov. 3 reported it has lost about $500 million at the midpoint of a $1.06 billion, four-year contract with Major League Baseball. NBC Inc. unilaterally cut the number of ads on its Notre Dame football games this fall by a third because of weak demand. And while ABC won't comment, it's likely that the network is losing money airing Monday night National Football League games. The common complaint: Too many games, too few viewers and advertisers, and ever-escalating production expenses.

No wonder ABC executives jumped earlier this year when Raycom, which is based in Charlotte, N. C., promised to take one problem off their hands. In essence, Raycom offered to rent the ABC network—at the bargain price of $1.8 million—for a series of college basketball games. ABC quickly agreed.

What did it have to lose? ABC's 1990-91 college-hoops schedule, averaging a p try 3 rating, lost money, and the n work was seriously considering droppi college basketball this winter. "V turned what was a losing propositi into a solid financial contribution ABC," says Anthony Petitti, progra ming director for ABC Sports.

Of course, Raycom isn't in this d because it likes to watch big, swea men throw balls at a metal circle. Ch Executive Rick Ray, 42, figures he c make a handsome profit by offeri compelling regional matchups and pa ing less to produce them (table). Rayc already is the syndicator for six of t eight major college basketball conf ences. So it had little trouble lining marquee teams, including Duke, Kans and North Carolina, three of last yea Final Four squads. The rights fees pays to the colleges are about 25% le than what CBS pays for regular-seas games.

Paying less is a Raycom watchwo By using nonunion, free-lance crews, spends no more than $25,000 to produ a typical college basketball game. T average cost for network crew $100,000 or more. Petitti says viewe won't notice the difference. "Rayc gives us a quality product," he says.

GOING PRO. Quality is nice, but advert ers want viewers. Raycom figures it c boost ABC's combined average rating 5 by airing as many as six separate gional contests on double-header Su days. That's hardly an earth-shatteri improvement, but Ray Warren, Ra com's executive vice-president for sal and marketing, says it should be enou to generate a minimum of $10 million ad sales, an average of about $40,0 per 30-second spot. Warren, who came Raycom from ABC in 1988, has alrea signed up Buick Motor Div. and A heuser-Busch Cos.

Ray and Executive Vice-President K Haines, 48, are so confident about t ABC deal that they're already layi plans to expand into pro sports in t years. That's when the current MI NFL, and National Basketball Ass broadcast contracts all expire. Rayc won't produce prestige events such the World Series or Super Bowl. But hopes to exploit the networks' new ca tion by joining forces with them or doing a deal directly with one of t leagues for regular-season packages.

That's big talk for an outfit that w pull in only about $65 million in revenu this year. But if it hadn't been for b talk, Raycom might not exist. In 19 Ray's bosses at a Charlotte TV stati balked at syndicating the Great Alas Shootout, a college-hoops tourname

ABC AND RAYCOM: HOW SWEET IT COULD BE

RAYCOM'S COSTS

Payment to ABC for 24.5 hours of airtime on six Sunday afternoons from Feb. 2 to Mar. 8	$1,800,000
Total production costs for 26 games	+ 650,000
Rights fees to 52 colleges and their conferences	+ 4,000,000
TOTAL	$6,450,000

RAYCOM'S REVENUES

Advertising sales goal	$10,000,000
POTENTIAL PROFIT	$3,550,000

DATA: RAYCOM INC., BW ESTIMATES

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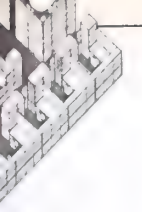

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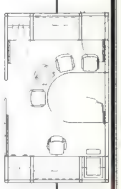

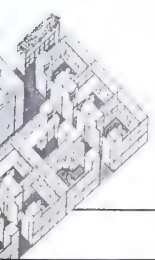

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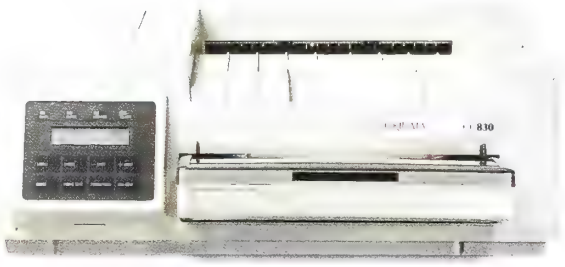

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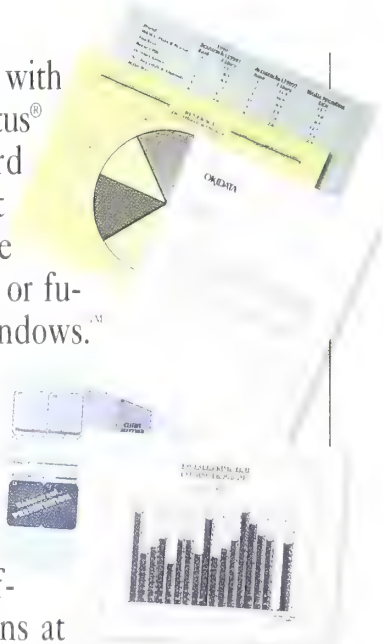

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from Alaska that invited teams from North Carolina. So Ray decided to strike out on his own. He teamed up with Dee Birke, owner of a local advertising agency, to form Raycom. They produced that year's Alaska tournament, lined up television stations to carry the games, and sold most of the advertising. And, oh yes, they got married six months later.

Rick and Dee Ray have followed their initial formula ever since. It mostly involves a good bit of common sense: Don't overpay for broadcast rights, and stick primarily to regional games in which local fans take a rooting interest. They own all but a small percentage of the company's stock—Haines and other senior executives own the rest—and have resisted overtures from investment bankers to sell out. And why not? They claim their private company has never lost money, although they did impose a five-month wage freeze in 1990 when ad sales fell for preseason football games.

HOME TEAMS. While other sports syndicators have stumbled, Raycom has survived and prospered by changing rules that stood in the way of making money. Most notably, Rick Ray altered the balance of power between syndicators and local TV stations. Realizing how hungry stations were for games of regional interest, he offered matchups featuring local teams. But instead of splitting about 20 minutes of ad time with local outlets, as was then the common practice, Ray jawboned stations into settling for revenues from only six 30-second spots per game. The rest of the ad revenues went straight to Raycom, with sales arranged by President Dee Ray.

Since 1982, Raycom has become a basketball powerhouse. This year, it will produce more than 350 games

Raycom's first big break was landing the TV rights to Atlantic Coast Conference basketball games in 1982. Since then, Raycom has become a basketball powerhouse. This year, it will produce more than 350 games. CBS and ESPN will buy about 50 of these games, but the bulk will be broadcast on ad-hoc Raycom networks of local stations. In addition, it has syndicated preseason NFL football games since 1985, and in 1990, it creat the Blockbuster Bowl, a postseason c lege game backed by Blockbuster Vid

Raycom's initial Blockbuster ga was shown on a one-shot network f local stations. To air the game this ye Raycom bought three hours of C prime time on Dec. 28 for about $1 m lion. And until Notre Dame lost to T nessee, Raycom had even bigger pla CBS had O. K.'d a move of the game Jan. 2 if Raycom could land a natio title match. Now, it looks as if the ga will pit No. 6 Alabama against anoth nationally ranked team.

Raycom also set its sights on Hol wood when it created an entertainme division in 1987. That move didn't p out, but the Rays still may take a run big entertainment syndicators such King World Productions Inc. Not th they would do anything rash. About t wildest thing they've done was buy a restore White Oaks, a 26,000-square-f mansion in Charlotte. Dee Ray says th wanted a showcase to host charity fu tions; White Oaks is now a regular st on the local social circuit. Not bad fo couple that not so long ago was scra bling to sell the Great Alaska Shooto

By Chuck Hawkins in Charlotte, N.

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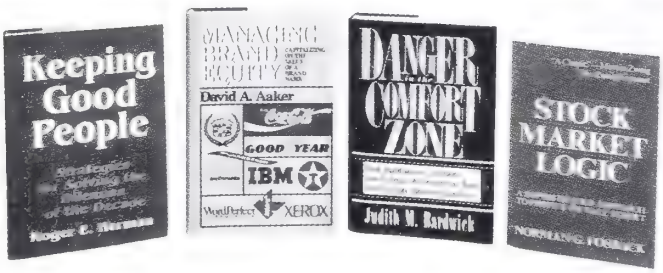

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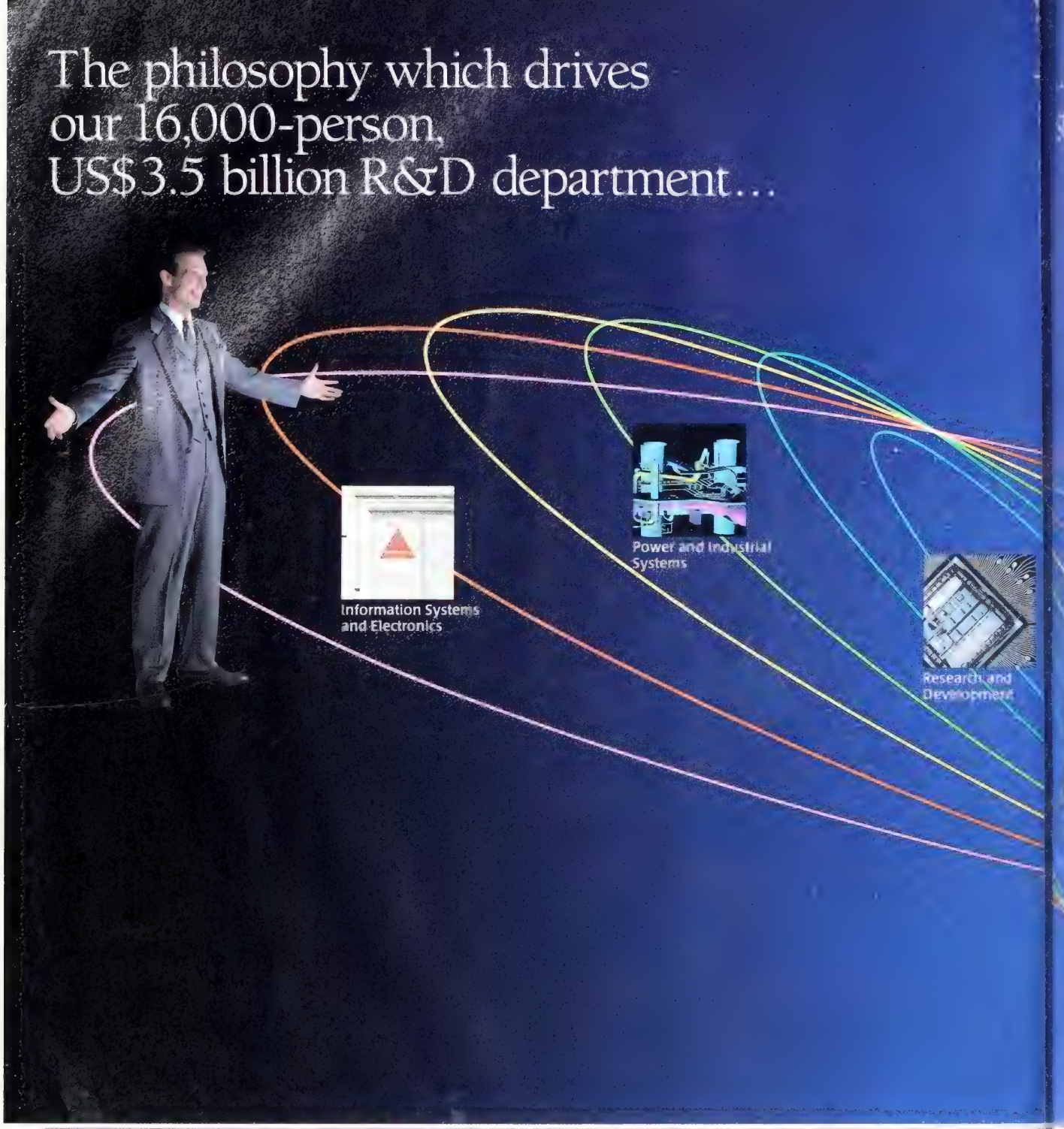

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SHORTER LINES: EARNINGS FELL 55% IN NINE MONTHS, AND THE STOCK HAS SUNK 25%

WHY 'BUSINESS STINKS' AT WOOLWORTH

Its specialty stores haven't protected the retailer against recession

For Woolworth Corp., the future wouldn't look quite so troubling if it didn't look so familiar. In 1982, the once-mighty retailer was stumbling, little more than a collection of aging five-and-dimes and a floundering chain of Kinney shoe stores. But starting in 1982, Harold E. Sells repositioned Woolworth as a profitable group of specialty retailers, including children's clothing stores, costume-jewelry shops, and the hugely successful Foot Locker sneaker chain. The chairman's strategy was a winner: Through much of the 1980s, Woolworth's earnings grew at a compound annual rate of 15%.

But oh, how the mighty have fallen: In the first nine months of this year, Woolworth's earnings plummeted 55%, to $75 million, on sales of $6.8 billion, up 0.8%. The stock, which as late as February had traded at 35, is down to 26, a 25% drop, compared with a 19% rise for specialty-retail stocks as a group.

Of course, times are tough all over in retailing. And Woolworth at least has earnings—something plenty of its rivals can't say. But investors are hammering Woolworth largely because they had hoped Sells's specialty strategy would provide a better cushion against lean times. Foot Locker, for example, had seen its sales quadruple, to $1.5 billion, from 1983 to 1990, and its franchise among sneaker-hungry teenagers was supposed to be unassailable. Overseas, Woolworth had a decades-old German operation, where profits grew an impressive 70% in 1990, after unification gave East German shoppers access to Western-style retailing.

So what went wrong? Woolworth's growth engines simply aren't powerful enough to pull it unscathed through a recession. Foot Locker's U. S. sales are still strong, it's true. But 1991's estimated growth of around 10% is well below the 23% average of the late 1980s. The reason is simple enough, but probably irreversible: Americans are gradually getting sneakered out. "Business is very good, but it gets tougher to do," says Glenn Hemmeter, CEO of Athlete's Foot in Atlanta, a rival to Foot Locker. Sells, who started as an assistant manager at Kinney Shoe Corp., which Woolworth acquired in 1963, admits that the sneaker market will be saturated by 1995. Before then, though, he figures he can add an additional 600 Foot Locker outlets to the 1,352 already in the U. S.

As for Germany—which last year accounted for 16% of total sales and 2% of profits—there are still plenty of consumers willing to shop at Woolworth. In the Woolworth in Bonn's Bad Godesberg section, for example, money-pinched ethnic Germans from Russia shop alongside better-off burghers. Says shopper Alexander Stedtfeld, a 34-year-old father of two: "Woolworth used to have a bit of a poor-people's image, but I'll go anywhere I can pay less."

LOYALTY LAPSE. The German division, though, hasn't been able to match the astounding performance of last year, when millions of East Germans, suddenly flush with West German marks, scooped up consumer goods. With the surge gone, same-store sales in Germany were off 8% in the third quarter.

The results in Germany and at Foot Locker have revealed weaknesses in the rest of the Woolworth empire. Domestic profits at its nonathletic apparel stores—which include Kids Mart, Richman Brothers, and Anderson-Little—plunged 74.4% to $13 million, in 1990. This year could be even worse. Richard Baum, a retail analyst at Sanford C. Bernstein & Co., says the apparel chains will likely report losses for 1991 (table). "Competitively, these businesses are not as strong as other people in the same segment," says Baum. Indeed, apart from Foot Locker, few Woolworth divisions enjoy an especially loyal following or strong franchise. Many are also concentrated in the recession-mauled Northeast.

The 1,312 Kinney family-shoe

FEWER NICKELS AND DIMES FOR WOOLWORTH

Estimated 1991 results compared with 1990	Sales	Operating profit
	Millions of dollars	
	Percent change	
GENERAL MERCHANDISE The old five-and-dimes, as well as German and Canadian stores	$5,430 −4%	$215 −35%
FOOTWEAR AND ATHLETIC APPAREL Includes Foot Locker, Kinney Shoes, and Champs Sports	$3,507 10%	$285 −3%
APPAREL Includes Susie's, Richman/Anderson-Little for men's suits, and Kids Mart	$1,140 4%	−$10 −177%
TOTAL 1991*	$9,945 −0.3%	$490 −23%

* Includes intercompany sales DATA: COMPANY REPORTS, SANFORD C. BERNSTEIN & CO.

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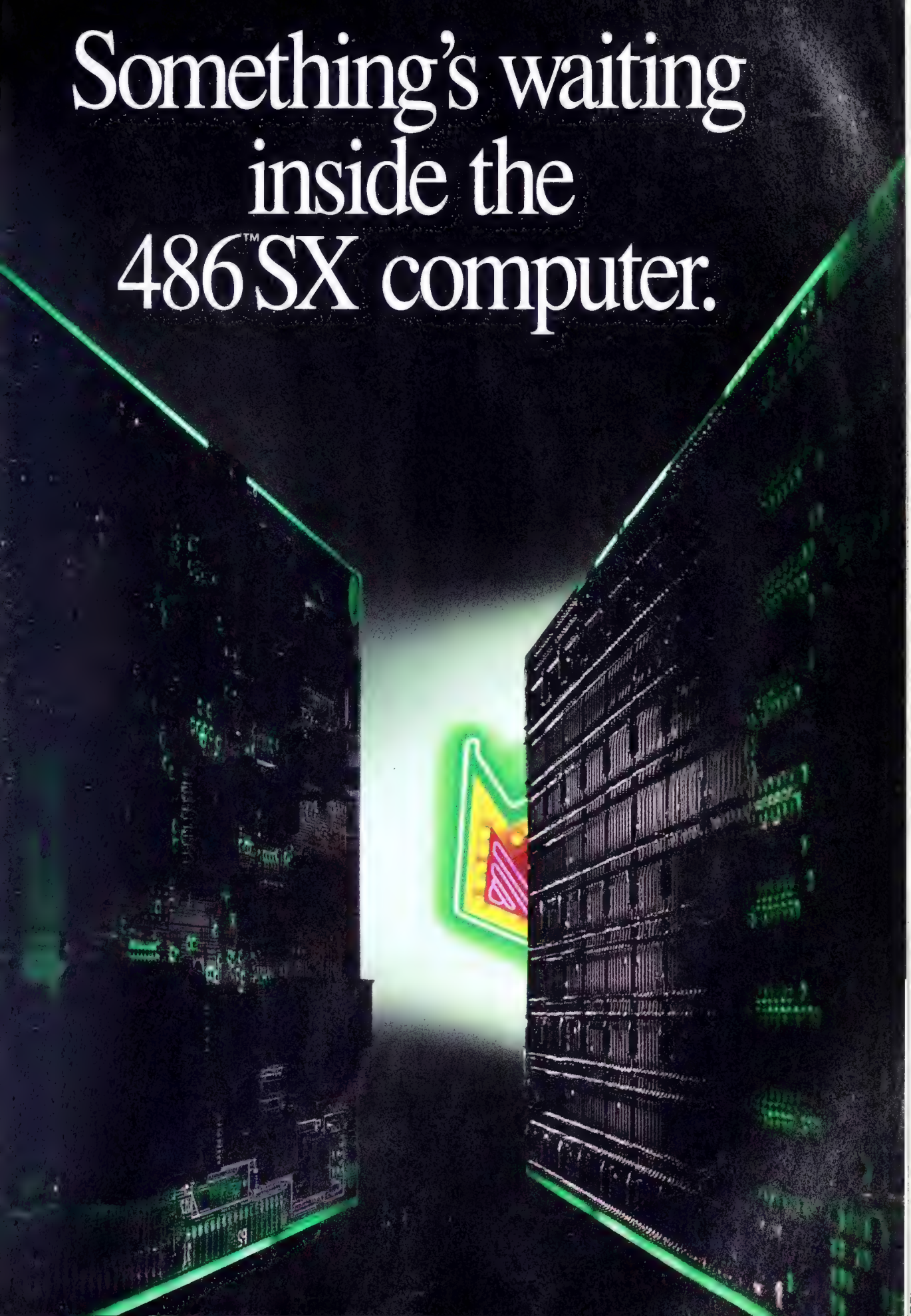

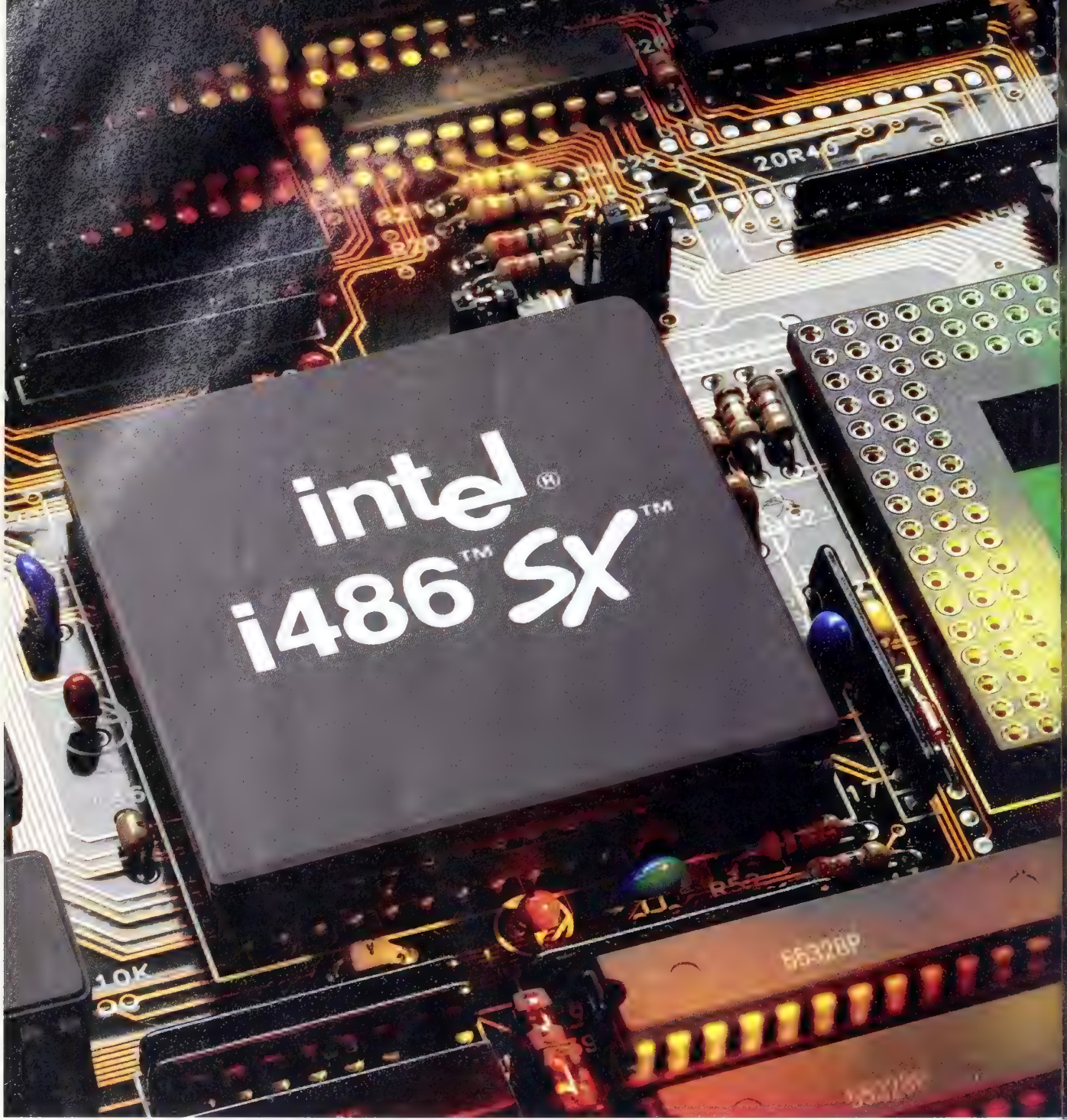

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—Karl Treutler, Munich

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stores are a case in point. The chain has been shrinking in size as the family-store market loses customers to more specialized outlets, and Kinney sales should come off 3% to $688 million this year. Bear estimates that Kids Mart, a 428-store clothing chain, will report a $4 million loss this year. It's being battered by a price war between giant Toys 'R' Us Inc.'s children's clothing chain, Kids 'R' Us, and department stores desperate for business. "We get caught in the middle," Sells says. He recently replaced Kids Mart's management but admits: "I don't think we have the answer on how to do it yet." As for Woolworth's Richman and Anderson-Little stores, they sell expensive suits—but even these are hardly a hot item for hard-pressed shoppers in a recession.

GRAND SLAM. Then there are the five-and-dimes. They must now compete with the big discounters but don't have the economies of scale to offer the lowest prices. The upshot? "Business stinks," says the assistant manager of a Woolworth store in Manhattan. And he's none too optimistic about Christmas:

> Sells wants to open 100 Foot Lockers a year in Europe, where demand for sneakers hasn't yet peaked

hope it's not like hell," he says. Sells plans for the five-and-dimes include closing about 20 stores a year and building up Woolworth Express, smaller, streamlined variety stores that sell such high-volume merchandise as health and beauty aids—and garner roughly double the sales per square foot of the old stores.

But what Sells is really hoping for is the kind of grand slam Foot Locker was in the 1980s. Now in the on-deck circle: Champs Sports, a mall store that sells footwear, sporting goods, and apparel featuring pro-team logos to teenagers and men; and, once again, Foot Locker. At Champs, sales have soared from $[illegible] million in 1987 to an estimated $397 million in 1991, according to Bernstein-Rein Baum. As for Foot Locker, Sells has "tremendous plans" to open 100 stores a year in Europe, where demand for athletic footwear is far from saturated.

Champs and Foot Locker could well turn into outstanding performers. But as Woolworth has discovered, putting a couple of stars in a show doesn't necessarily make it an enduring hit.

By Laura Zinn in New York, with bureau reports

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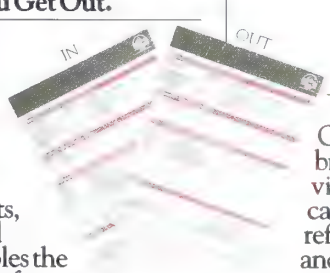

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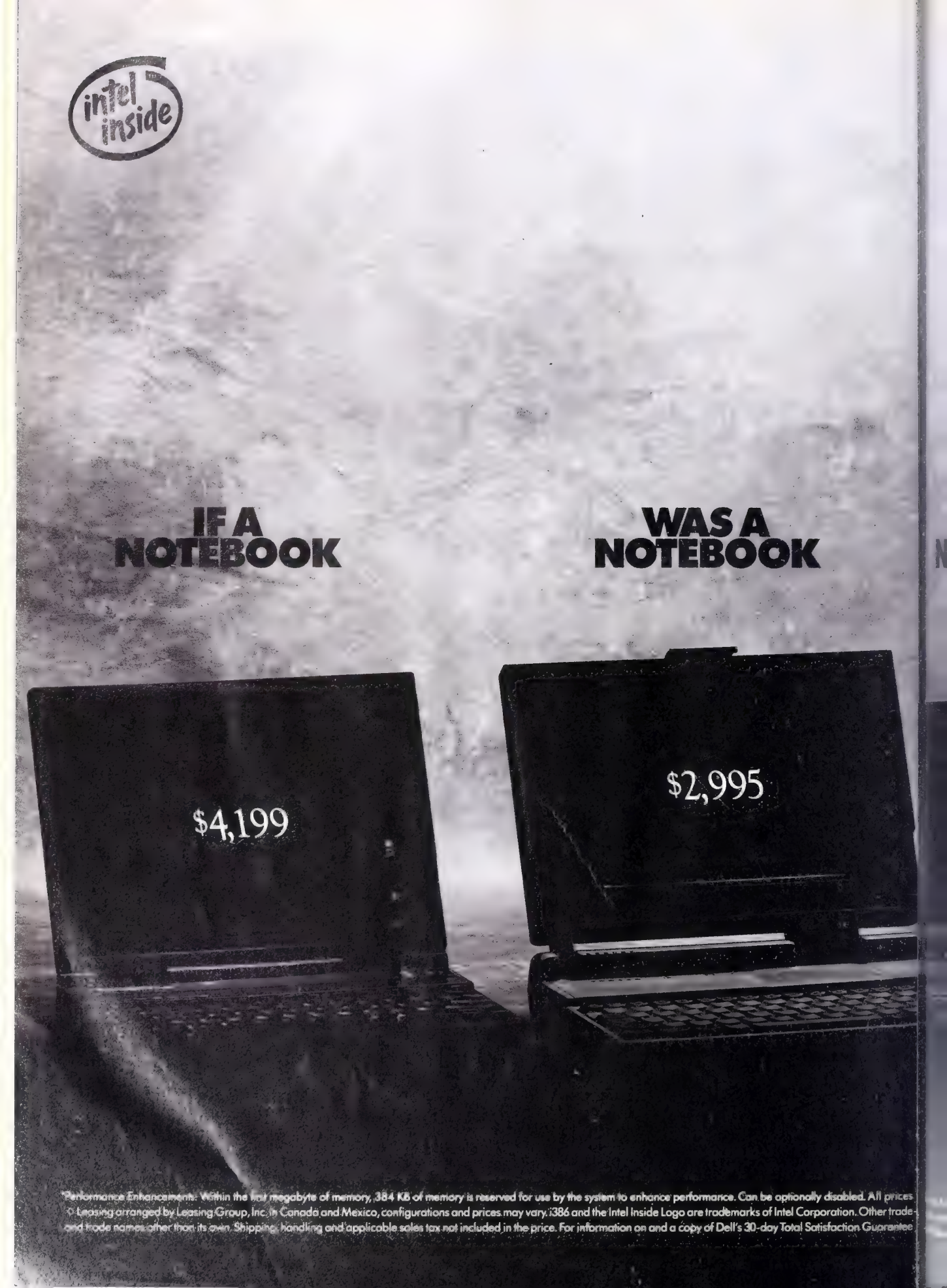

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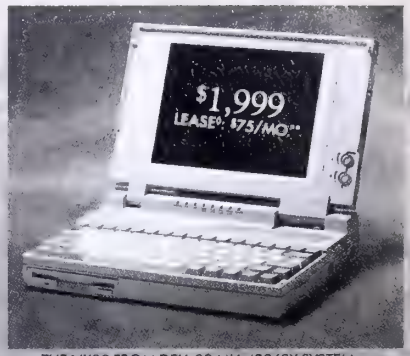

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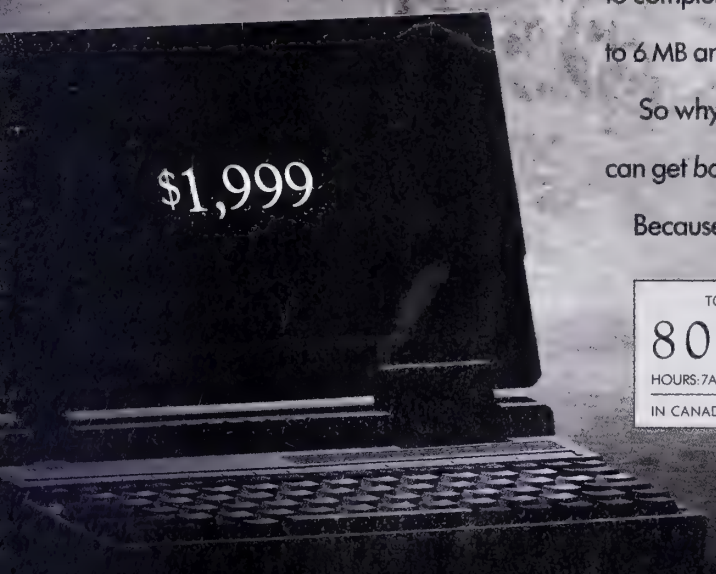

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Engineers at Boeing Co. have access to the fastest supercomputers in the world. Their $9 million Cray Research Inc. Y-MP, for example, can blast through 1.3 billion calculations per second. But is that enough power to satisfy them? Nooooo.

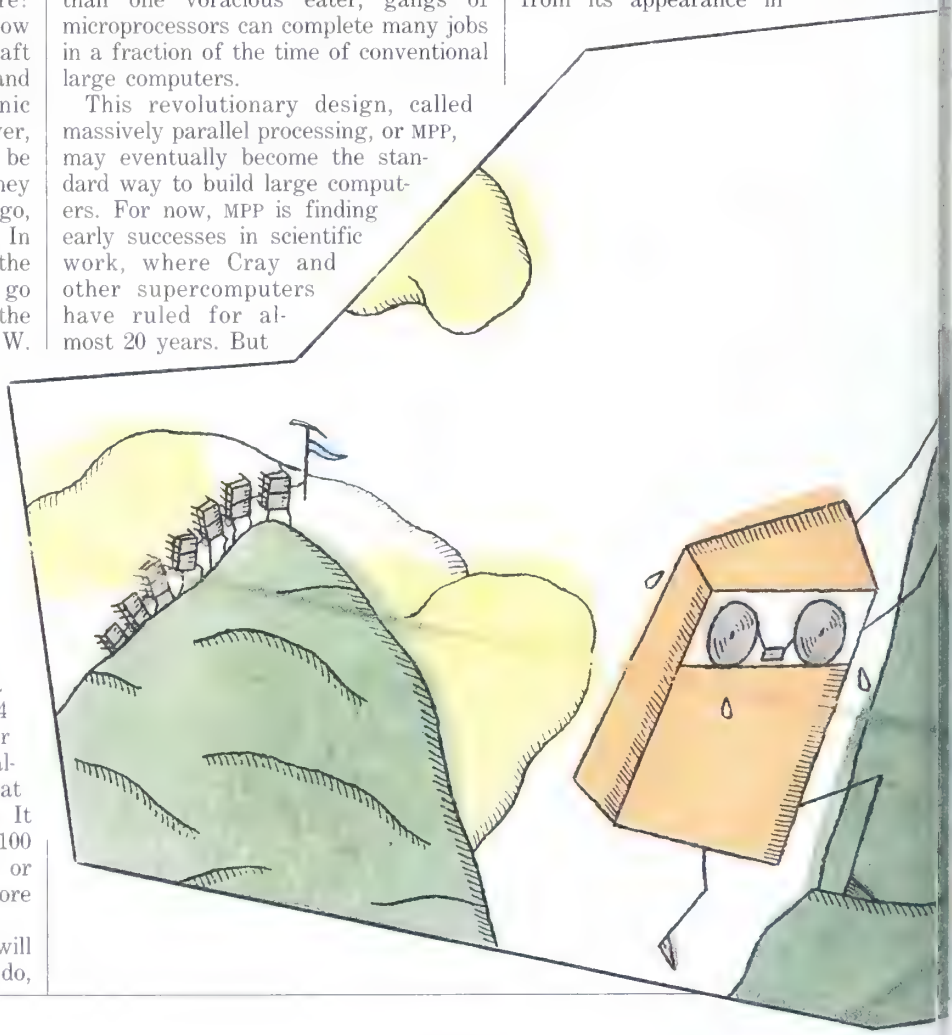
Sure, they can use the Cray to simulate air flowing over a future jumbo jet's wing. But why stop there? Why not model the airflow around an entire aircraft and calculate how the wings, tail, and fuselage might fare at supersonic speeds? Given enough processing power, Boeing engineers might eventually be able to tell a computer how big they want the plane to be, how far it must go, and what the fuel economy should be. In the end, the computer could design the whole thing itself. "We want to go where no man has gone before. It's the old *Star Trek* thing," says Kenneth W. Neves, manager of high-speed computer programs at Boeing. "But we need the starship."

TOPS IN FLOPS. Not to worry, it's on its way. It's called a teraflops computer, and it will crunch through a mind-boggling 1 trillion arithmetic operations per second—more than 50 times more power than today's fastest machines can offer, for about the same price. It will do in one second what a person could do punching one calculation a second into a hand-held calculator, 24 hours a day, 365 days a year, for 31,709 years. Such a computer will allow researchers to tackle jobs that seemed impossible a few years ago. It could assess global climatic change 100 years into the future, for instance, or use quantum mechanics to squeeze more mileage out of cars.

The teraflops computer, though, will be historic not only for what it will do, but for how it will do it. Instead of ramming chunks of data one at a time through a single, central circuit, the way virtually all computers now operate, it will harness the power of hundreds, thousands, or even tens of thousands of powerful microprocessors—something like jamming all the PCs in a large office building into one box, wiring them together with a miniature network, and programming them to cooperate on a single problem. Just as 12 hungry people can polish off a box of doughnuts faster than one voracious eater, gangs of microprocessors can complete many jobs in a fraction of the time of conventional large computers.

This revolutionary design, called massively parallel processing, or MPP, may eventually become the standard way to build large computers. For now, MPP is finding early successes in scientific work, where Cray and other supercomputers have ruled for almost 20 years. But with more sophisticated software in place, the machines may carve out a role in commercial data processing, too. This year, for instance, Teradata Corp. will sell about $300 million worth of specialized MPP gear for finding patterns in volumes of business data too cumbersome for the largest mainframes from IBM and Unisys Corp.

MPP technology actually marks the final phase of the microprocessor's ravishing sweep across the full spectrum of computer hardware. Evolving rapidly from its appearance in



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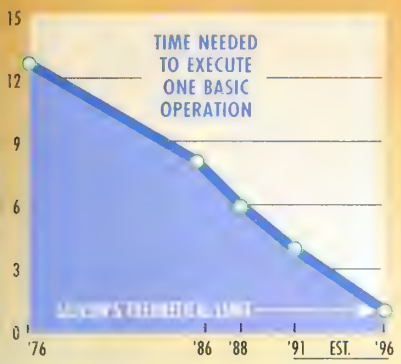

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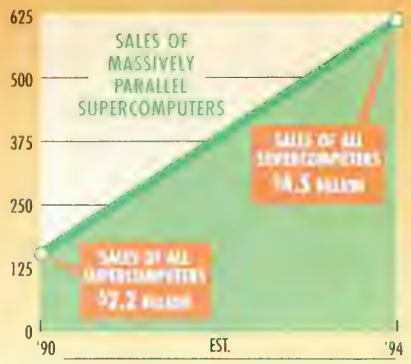

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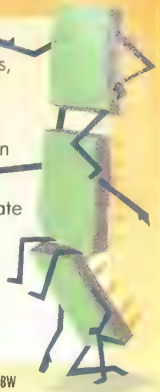


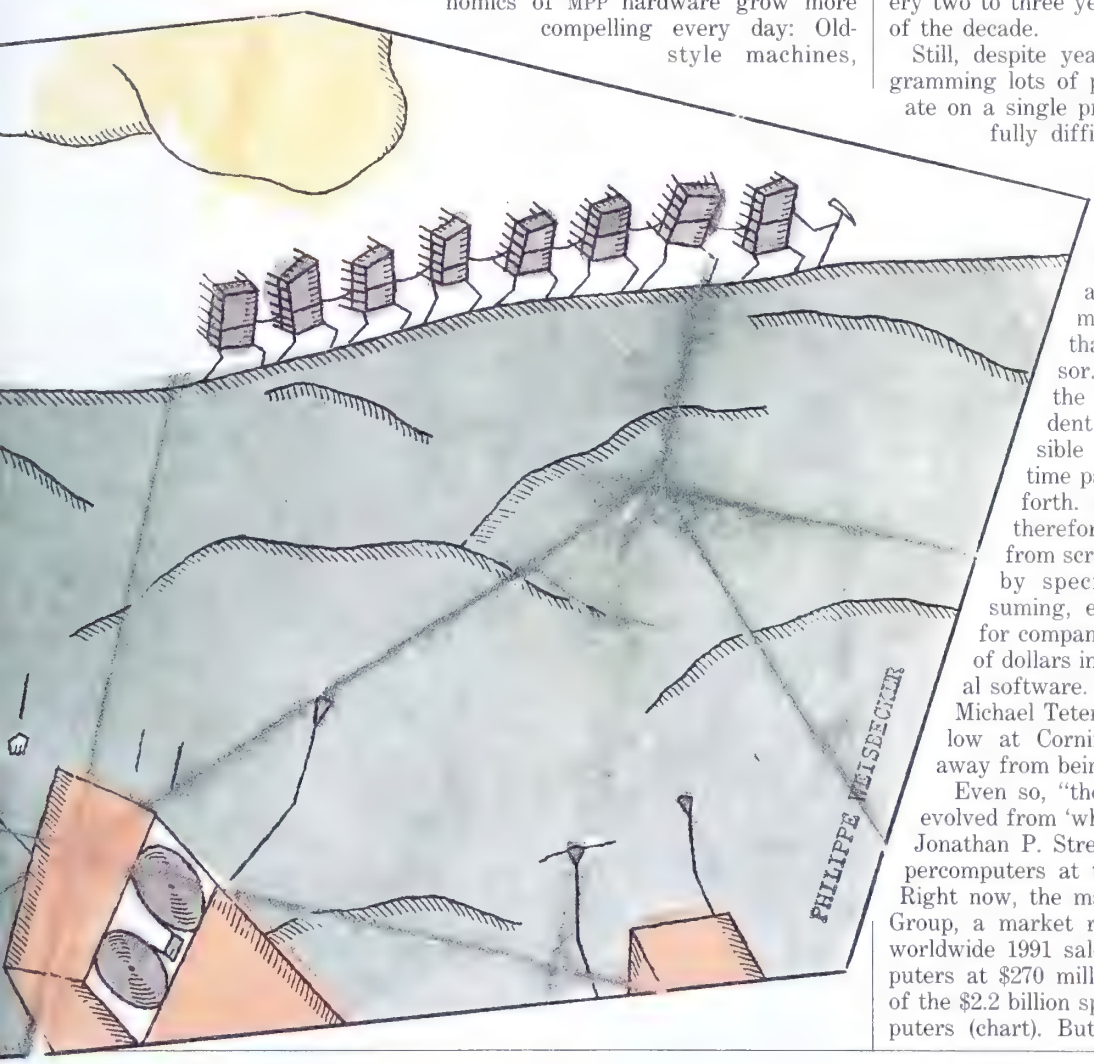
DATA: SANFORD C. BERNSTEIN & CO., SMABY GROUP, BW

e early 1970s as a simple device good ly for controlling traffic lights and ch, the microprocessor by the mid-80s was replacing entire minicomput-s. Now, ganging up in large numbers, s poised to fundamentally rewrite the nomics of the $52 billion market for inframes and supercomputers domi-ted by IBM and Cray Research. While mpanies such as Intel, Thinking Ma-nes, and nCube aim for both compa-nies' markets, AT&T's NCR is about to launch a specialized attack on the main-frame with a general-purpose version of Teradata's machine. Data-base software company Oracle Corp., meanwhile, is working on software for commercial MMP machines.

COOKIE-CUTTING. Nobody is predicting the immediate demise of mainframes or supers: They're running too much useful software to be discarded. But the eco-nomics of MPP hardware grow more compelling every day: Old-style machines, based on proprietary designs, can't touch the microprocessor's tremendous manufacturing economies of scale. The chips get stamped out like so many mil-lions of cookies a year. What's more, using a technology called reduced in-struction-set computing, or RISC, micros are within spitting distance of the raw number-crunching speed of conventional large processors. And it looks as if mi-cros will continue doubling in speed ev-ery two to three years through the rest of the decade.

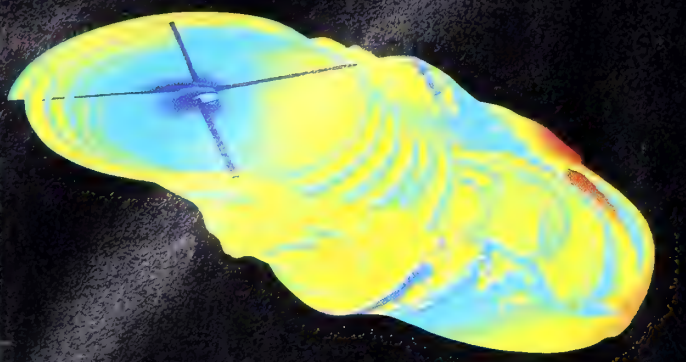
Still, despite years of research, pro-gramming lots of processors to cooper-ate on a single problem remains pain-fully difficult. Researchers so far have identi-fied only a few, narrow classes of jobs that can be eas-ily split into pieces and run faster on multiple processors than on a single proces-sor. The trick is making the pieces as indepen-dent of each other as pos-sible so they don't waste time passing data back and forth. Most MPP software, therefore, must be written from scratch, line by line, and by specialists—a time-con-suming, expensive proposition for companies that have billions of dollars invested in conventio-nal software. MPP computers, says Michael Teter, an engineering fel-low at Corning Inc., are "years away from being massively useful."

Even so, "the field has definitely evolved from 'what if' to when," says Jonathan P. Streeter, who tracks su-percomputers at the Commerce Dept. Right now, the market is tiny: Smaby Group, a market researcher, estimates worldwide 1991 sales of MPP supercom-puters at $270 million, a small fraction of the $2.2 billion spent on all supercom-puters (chart). But with MPP revenues

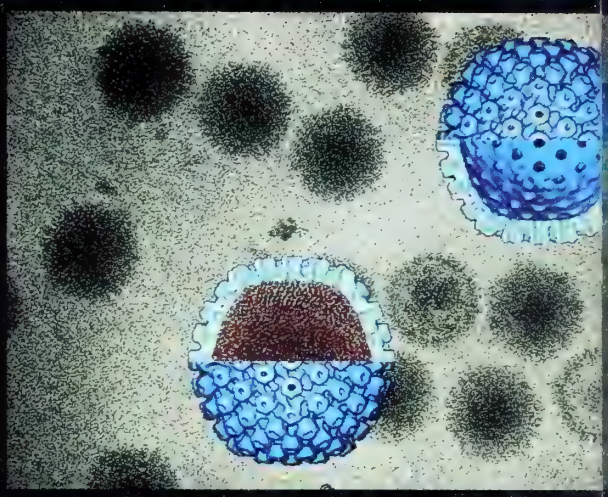


CHARTS BY KAY VELA BW

PARALLEL PROCESSING'S TARGETS: FROM MICRO TO MACRO



▲ **HEAVY TURBULENCE** Calculating the complicated wake of spinning rotor blades helps United Technologies design copters that are safer, more stable, and less noisy. An 8,000-processor Thinking Machines CM-2 computer did this job



▲ **INSIDE A VIRUS** The National Institutes of Health used a supercomputer to create three-dimensional reconstructions o herpes virus, including its shell and DNA. In the background electron micrographs of real herpes virus shells

expected to grow by 40% a year through 1994, many companies in the U. S. and Europe are scrambling for a position in the market (table).

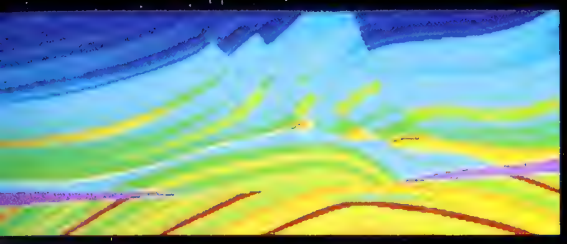
As small as it is, the fledgling MPP market is in turmoil. No single way of linking a bunch of microprocessors has emerged as the most technically compelling design. That means neither software companies nor customers are sure of which technology to bet on. New alliances, meanwhile, seem to pop up every week. While established computer companies investigate MPP themselves, they're also scrambling to hook up with aggressive startups. Digital Equipment Corp. has an investment stake in MasPar Computer Corp. in Sunnyvale, Calif. IBM recently formed a joint venture with Thinking Machines Corp. to link the latter's Connection Machine with IBM's market-leading mainframe. And Japanese companies are now working together in a government-sponsored Real World Computing Project to develop MPP and other technologies.

RICH UNCLES. The MPP race has seen some early dropouts, too, including Bolt Beranek & Newman, Floating Point Systems, Myrias, and Teraplex. Most haven't been able to raise the cash needed to survive in a market where the technology is changing rapidly, and near-term payoffs are so small. Ben Barker, president of BBN's advanced computer subsidiary, says developing a new MPP design can easily cost $50 million. BBN's effort, focused on a computer called the Butterfly Machine, lost about that much and failed to get outside financing. "The only people making it are people with a rich uncle," Barker says.

The richest of those is Uncle Sam. The Pentagon's Defense Advanced Research Projects Agency (DARPA) has been pumping money into MPP research ever since the early 1980s, when the "Star Wars" Strategic Defense Initiative began. Since 1983, DARPA has invested more than $200 million in parallel computing. The SDI program has contributed tens of millions more. "High-performance computing will be essential to our defense in the 21st century, so we'd better make sure there's a technology base," says Stephen Squires, director of computing system technology at DARPA.

The government's role in this nasce market is controversial. Because DARI puts some of its MPP budget into dire company grants, some companies co plain that the Pentagon is picking MI winners and losers. Thinking Machine and Intel Supercomputers, a division chipmaker Intel Corp., are the two ma beneficiaries of Penatgon largess. The also have the two biggest shares of th scientific MPP market. "It has locked

CMU'S SCHUMACHER WITH A CONNECTION MACHINE



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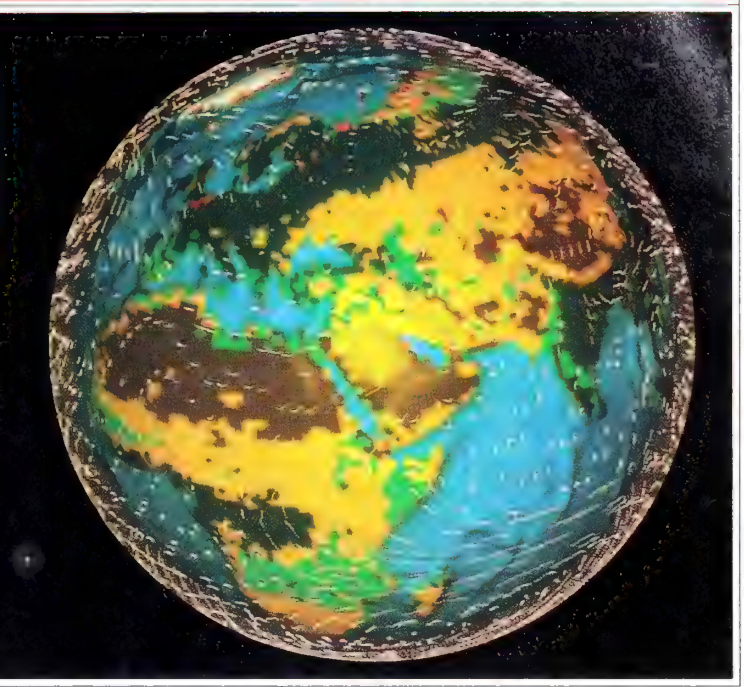

HEATING UP? To model the earth's future climate, the atmosphere must be divided into more than 1 million small sections, 20 layers deep—a job for massively parallel machines. The Energy Dept. hopes to boost the speed of its models by 10,000 times. Colors indicate the kinetic energy of one layer, from purple (low) to red (high)

f a lot of sales," complains Stephen
y, CEO of MPP maker nCube Inc.
litics aside, MPP is changing radical-
w government and private industry
e problems that range from the
tomic to the intergalactic. Take
l climate modeling. Scientists regu-
simulate the earth's climate pat-
to forecast pollutants' effects on
ozone layer, global warming pat-
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lations, though, are accurate only
t a decade into the future, which isn't enough. The pollutants "may not cause much effect over 10 years, but they might have sizable effects over a century," says David W. Forslund, a physicist and deputy director of advanced computing at Los Alamos National Laboratory.

That's why Rick L. Stevens, a researcher at Argonne National Laboratory, is working on a 100-year climate simulation that will plot how ocean and air currents interact. "The problems we want to solve are levels of magnitude beyond what today's computers are capable of," Stevens says. Controlling pollution "is going to take a great degree of cooperation from a significant faction of people. These [simulations] are the only way to state with a great deal of confidence what the consequences of public policies would be," says Steven A. Walker, director of parallel processing applications at Cray Research.

'GETTING CHEAPER.' Eventually, the teraflops computer may also help capture energy's holy grail—controlled nuclear fusion. Researchers want to spend billions building reactors to test their latest theories on the subject. A teraflops could help identify the best design beforehand through simulations. "Before we spent billions, we would have some confidence the thing actually would work," says Los Alamos' Forslund.

Teraflops speeds could also help scientists calculate the effects of toxins on humans. Supercomputers today can simulate molecular interactions, but only with molecules that are relatively simple. "Toxins like dioxin tend to be larger, more complicated molecules," says Argonne's Stevens.

MPP systems are helping corporations, too. Oil companies, traditionally big users of supercomputers, are moving to MPP to analyze seismic data. Says Charles C. Mosher, a research scientist at Arco: "Massively parallel computing is cheap and getting cheaper. Mainframes and traditional supercomputers are staying pretty much flat. I had to ask myself: Which one do I want to be on?" He now uses an Intel iPSC/860 to create three-dimensional images of geological features and oil reservoirs. An nCube computer is doing the same at Shell Oil Co.

The big payoff for MPP, though, may be reaped in the mundane world of data processing, where corporations use lots of mainframes to churn out payroll checks and the like. So far, managing large data bases seems to offer the best opportunity for the new computers. That's because, as companies install thousands of desktop and hand-held computers, they're accumulating far more data than their mainframes can sift through. But hidden patterns in all that data may lead to greater profits.

Discount merchandisers Kmart, Wal-Mart, and Mervyn's, along with AT&T and other telephone companies, have been using Teradata's MPP computer for several years. Harnessing hundreds of Intel 486 microprocessors, the Teradata machine can identify fleeting sales patterns in a matter of hours—not the days it might take a traditional mainframe. The quick feedback on what colors and styles are selling best each day helps Mervyn's, for instance, order garments from Far East suppliers.

Such superfast data searches may

THE MASSIVELY PARALLEL CROWD

LOCKSTEP MACHINES

arallel supercomputers have their many
ors work in lockstep, each doing exact-
me thing at the same time, but to dif-
ieces of data. Manufacturers: **Active**
y Technology, MasPar Computer,
g Machines, and **Wavetracer**

THE INDEPENDENTS

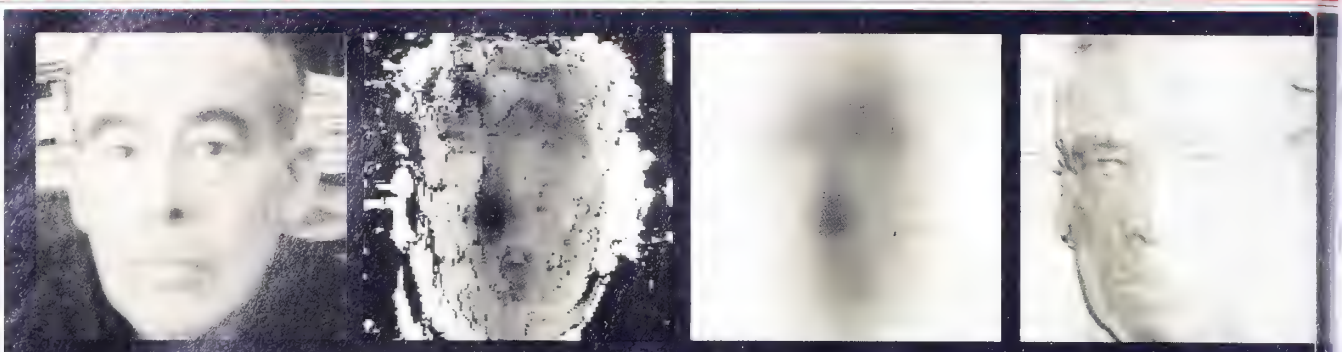
er style of parallel design gets each
or to follow its own program. That
he machine more flexible, but much
fficult to program. Suppliers: **Alliant**
ter, Intel, Meiko Scientific, nCube,
ec, and **Thinking Machines. Tera-**
pplies a highly specialized system to
mercial data processing market

FUTURE PLAYERS

entries in the MPP market: Supercom-
ader **Cray Research,** startup **Kendall**
Research, AT&T's **NCR** unit, and
er giant **IBM**

DATA: BW

(TOP LEFT) PHOTOGRAPH BY ION GOELL



A THREE-DIMENSIONAL MAKEOVER Running on a Thinking Machines CM-2, a French parallel-processing program starts wit two conventional photographs, which it analyzes and then combines into a single, much more lifelike image

eventually form the basis of "decision support centers" for executive suites. Business Research Institute is developing such a system that would let executives call up text, numbers, photos, maps, and even video clips—all hooked up to an MPP data-base computer.

SOFTWARE MAZE. Ultimately, MPP machines could add great flexibility to how computers get built, too. Conceivably, machines ranging from desktop workstations to supercomputers could be built from multiples of a single processing element. That would mean much lower manufacturing costs and greater flexibility for customers, who could install just the right size of computer now and expand it in the future.

Most of this is talk for now, for two reasons: minimal sales and the daunting software problem. Most MPP machines so far are used in research, not for making money. Robert Schumacher of Carnegie Mellon University, for instance, is using a Connection Machine to study the physics of musical instruments.

Until they're easier to program, the machines' only commercial use will be in special situations—where the poten payoff is enough to overcome the h cost of creating software. Two rec examples: American Express plans use two Thinking Machines CM-5 c puters to sift through credit-card ords and identify the buying pattern its individual customers. And E dential Securities Inc. uses an I MPP machine to evaluate finan instruments.

In the meantime, intense effort is ing focused on the software problem far, it has achieved only increme

IF YOU NEED SLIGHTLY LESS POWER

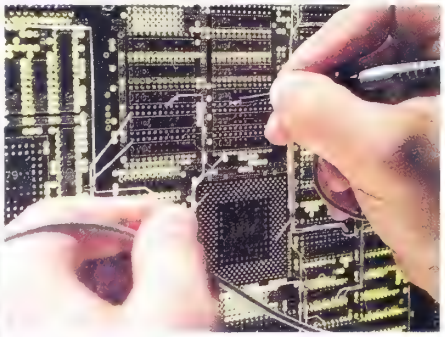
Multiprocessing isn't just for supercomputers and mainframes anymore. Indeed, the technology is rapidly changing the way minicomputers and even workstations are designed—and the way big companies buy computers.

Take Tootsie Roll Industries Inc. When the candy maker needed a more powerful computer, President Ellen R. Gordon first considered a $1 million Digital Equipment Corp. VAX minicomputer. After shopping around, she settled instead on something just as powerful for a quarter of the price—a computer from Sequent Computer Systems Inc. that uses 30 of the Intel microprocessors found in most personal computers.

Tootsie Roll's experience is becoming almost common, as multiprocessors take on the jobs that used to be locked up by minicomputers. By 1995, figures Gartner Group Inc., 90% of midrange computers sold—those that cost $200,000 to $700,000—will be multiprocessors, up from 25% now. Says Dataquest Inc. analyst Robert Kidd: "It's nothing short of a revolution."

Like massively parallel processing (MPP) systems, multiprocessors employ inexpensive microprocessors. But rather than forcing those processors to cooperate on one large program, as MPPs do, the computer parcels out various jobs among processors, which are each running a copy of the program. That means existing software doesn't have to be rewritten to work on multiprocessors, the way it must be for MPP computers. The result? Something like a dozen bank tellers who can together handle a line of customers faster than one ultraspeedy teller—but for less money.

That's making multiprocessors attractive for all sorts of work, fr tracking DHL's package deliveries managing US West's cellular billing. August, Hyatt Hotels dumped the I mainframe running its reservation s tem in favor of a Pyramid Technolo multiprocessor supplied by AT&T. G don S. Kerr, a Hyatt senior vice-pre dent, says the new machine costs 3 less to run and is easier to program



PYRAMID'S SYSTEM REPLACES A MAINFRAME

ME-TOO MULTIS. Such testimonials ha makers of traditional computers ru ing to launch multiprocessors. In N vember, minicomputer maker Hewle Packard Co. plans to unveil a fo processor computer, to be follow next year by a 16-processor model. A PC makers such as Compaq Compu Corp. have even begun selling mu processors as "servers" to anchor n works of PCs. The competition is taki its toll on the pioneers: Sequent s fered a $23 million third-quarter l when Unisys Corp. decided to stop selling Sequent's machines and bu its own.

Multiprocessors do have limitatio Because putting too many chips in o machine can result in traffic jams data, they can't handle the larg jobs, such as reservation systems f major airlines. But for such compan as Tootsie Roll, the computers are sweet alternative to massive minis.

By Robert D. Hof in San Franci

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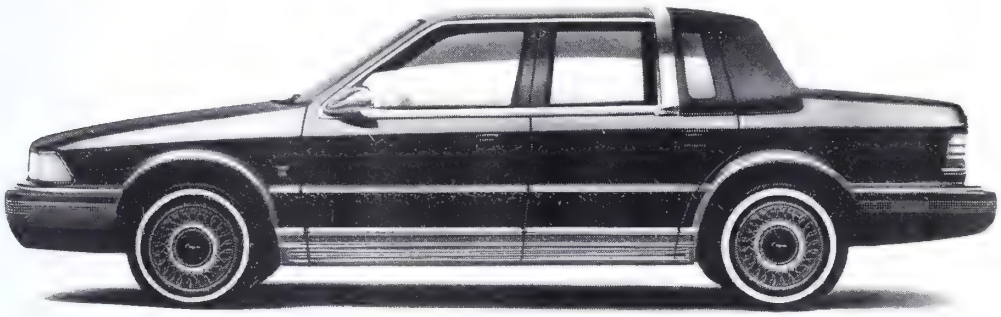

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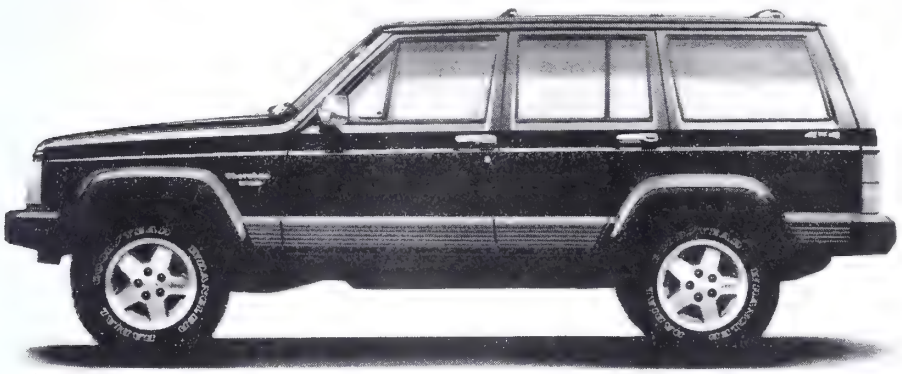

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gains. There's no sign of a grand breakthrough in the hideously complex problem of getting 100, let alone 10,000, different processors working together harmoniously. Only tedious trial and error gets most MPP programs working. But as Paul Messina, executive director of the Concurrent Supercomputing Consortium at the California Institute of Technology says: "The average user isn't that masochistic."

The best that can be done, says Abraham Peled, director of computer science research at IBM, is to create standards and better MPP programming tools—programs designed to help software writers keep track of myriad details and identify bottlenecks. "People's intuition just isn't developed for this kind of programming," Peled says. MPP hardware makers, meanwhile, are spending heavily to get useful software written for their machines. MasPar, for one, spends 75% of its development costs on software.

Still, the problems with today's software aren't preventing computer designers from sketching out even more massively parallel machines. Japan's Real World Computing Project talks of creating a 1 million-processor machine that would boast a theoretical peak speed of 125 trillion operations per second—enough to keep you and your calculator busy for, oh, about 4 million years.

By Russell Mitchell in San Francisco, with Gary McWilliams in Boston, John Carey in Washington, Neil Gross in Tokyo and John W. Verity in New York

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WHAT? CRAY COMPUTERS EATING DUST?

Cray Research Inc. is used to being on top. Since 1976, when founder Seymour Cray first shipped his ultrafast Cray 1, the company has been nearly synonymous with supercomputing power. Indeed, Cray Research made an astonishing 65% of the advanced supercomputers in use today, and engineers and scientists still regard its technical prowess with awe.

That's what makes a new advertising campaign by brash upstart nCube Corp. so startling. The ads prominently feature an assortment of outmoded technology, including a stone tablet, a vintage manual typewriter—and a Cray 1.

BROKE SLOWLY. Cray's usually serene chief executive, John A. Rollwagen, is annoyed by the persistent criticism that powerhouse Cray Research is late getting into the market for massively parallel processors. "I guess we'll give up," he growls sarcastically. But he doesn't deny that Cray is behind in MPPs. "Do I wish we had a product on the market today?" he asks. "Yes. Do I wish we had started a little earlier? Yes. But being first doesn't take the day. We're going to do it best."

To get there, Rollwagen last year launched an MPP research team run by Steve Nelson, who just finished designing the company's newest supercomputer, the Y-MP C90. It can do some parallel processing, which splits calculations over many processors, but it will be used mostly to handle data sequentially, one calculation after another. By 1993, Cray's MPP research will bear its first real fruit: an MPP add-on that will gang together as many as 1,024 microprocessors.

Cray's long-term plans are even more ambitious: It wants to put a new twist on MPP design by trying to make all those microprocessors swap information faster than other MPP computers. To help accomplish that, Cray Research plans to shorten the machine's internal wiring and jam the processors closer together. The method is more expensive, but Rollwagen says that as a result, Cray Research by 1997 will be the first company to make a computer that can sustain 1 trillion operations per second, the vaunted teraflops.

To win the teraflops race, it will have to beat such competitors as Intel, nCube, and Thinking Machines. And Cray's late start doesn't help. The company resisted MPP until recently because the technology was a big departure from Cray's roots. New technology "is always a challenge for any company with a mature product," says F. Ron Bailey, director of aerophysics at NASA Ames Research Center.

ROLLWAGEN: "WE'RE GOING TO DO IT BEST"

It's still hard to think of a Cray supercomputer as a mature product. Throughout the last decade, Cray machines radically changed the course of science and engineering, allowing scientists to simulate nuclear blasts in outer space and engineers to fake car crashes.

NOT SO HOT. The key to the technology was Seymour Cray's work in vector processing, a way of zapping information through computer chips 10 times faster than was previously possible. Today, that's not fast enough: "The days are numbered" for vector machines, says David M. Tolle, research manager for emerging technologies at Shell Oil Co.

Now, the question is how healthy Cray Research can remain until it moves into MPP. Rollwagen says that because it's hard to develop MPP software, vector computing will remain a strong market for many years. That will help Cray Research report steady increases in revenue and earnings, says Barry F. Willman, an analyst at Sanford C. Bernstein & Co. In 1992, he projects, Cray will earn $133 million on sales of $937 million, vs. 1991 projected earnings of $111 million on sales of $850 million.

Meanwhile, Seymour Cray, now 66, left Cray Research in 1989 to set up Cray Computer Corp. He's working on a vector machine that uses ultrafast but expensive gallium arsenide chips. And he has no plans to develop MPP. "Plenty of others are doing it. We want to make a unique contribution," explains Cray Computer President Neil Davenport. The grand old man of supercomputers, for one, doesn't think MPP is the only way to go.

By Russell Mitchell in Chippewa Falls, Wis.

FIGHTING FOR OUR FUTURE

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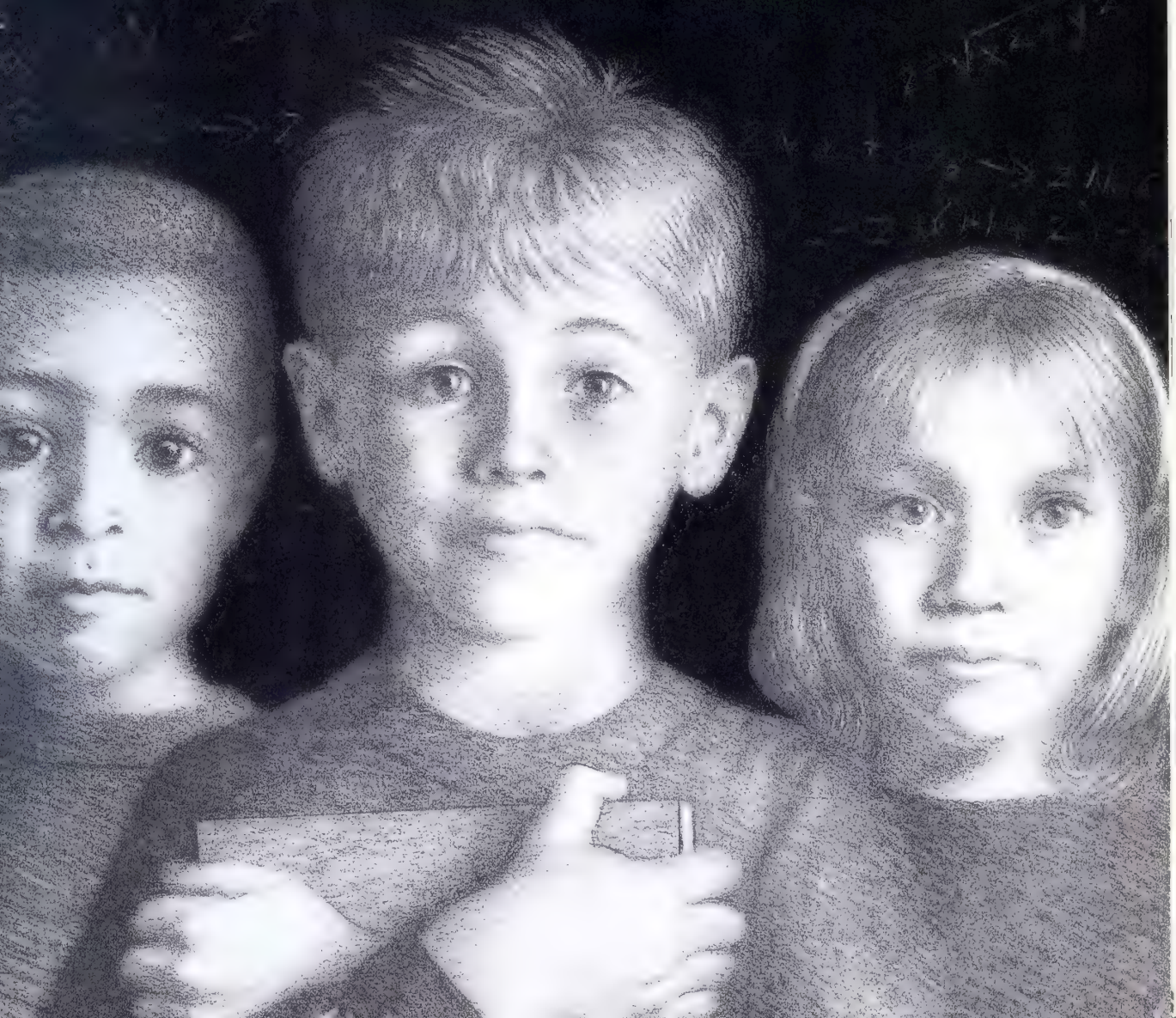

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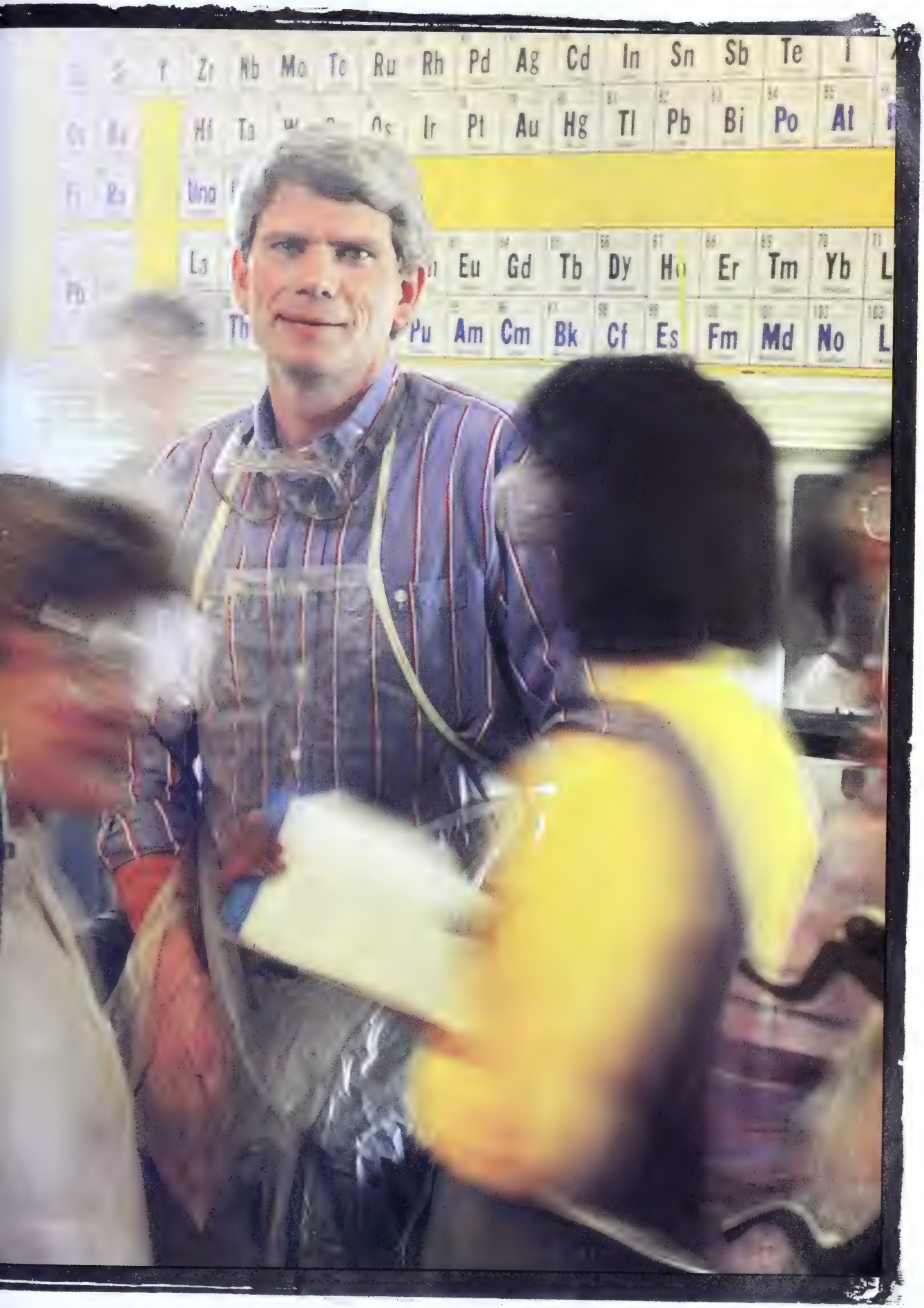
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TOWARD WORLD-CLASS STANDARDS

Lamar Alexander
Secretary of Education

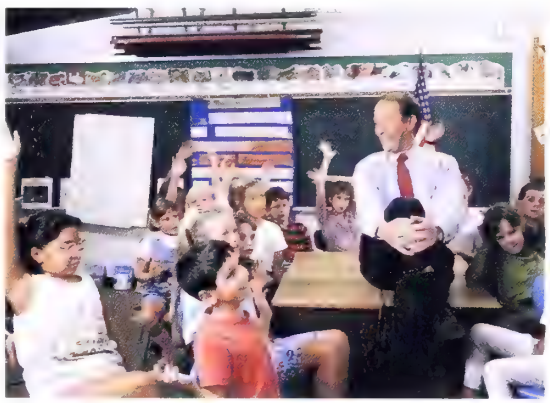
t's been eight years since the National Commission on Excellence in Education declared us "A Nation at Risk." Yet today, most of our education trend lines are still flat. And the rest of the world will not sit idly by ting for America to catch up.

However, we have made a start. Last year, President Bush the nation's governors adopted six ambitious education s. One of these goals calls for American students to nonstrate competency in certain core subjects: English, hematics, science, history, and geography. Another calls our students to be first in science and mathematics by year 2000.

Building on these goals, on April 18 the President proposed AMERICA 2000 education plan as a strategy for achieving goals. The first of its four tracks fosters better and more ountable schools for today's students. Through a 15-point ountability plan, parents, teachers, schools, and communi- are all encouraged to measure and compare results, and to st on change when the results aren't good enough.

One key point in the AMERICA 2000 plan is to develop onal "world-class standards" for n of the five core subjects. ther is to produce "American ievement Tests," a new, volun- nationwide examination sys- based on the five subjects. Both be developed in conjunction n the National Education Goals el, made up of governors and inistration officials appointed President Bush and the National vernors' Association. The panel monitor and report on progress ard the national goals.

TERRY ASHE



We should, of course, distinguish between "national cur- lum standards" and "national curriculum." There is an rely appropriate concern that our strong American tradi- of state responsibility for education and local control of ools be preserved and supported.

have recently seen first-hand how national standards, ed on national consensus, can be developed with state local autonomy in mind. In the spring, President Bush I participated in the National Summit on Mathematics essment, a meeting of educators, test developers, and pub- policymakers convened by the Mathematical Sciences ication Board of the National Academy of Sciences.

There it was evident that mathematics teachers, independent of federal and state controls, have built consensus among the mathematics community, the education community at large, parents, and public policymakers on what mathematics U.S. students need to know and be able to do.

Demanding goals and standards for mathematics have emerged out of this consensus process over the last several years. These standards define a coherent, unifying national vision for mathematics education, yet provide a flexible framework for teachers, schools, districts, and states to use in developing new mathematics programs. No national curriculum is intended, nor do states and localities choosing to use these new standards to guide revitalization of their mathematics programs perceive them as such.

Meanwhile, mathematics educators have begun developing guidelines for examinations and accountability systems that can give students, parents, teachers, schools, and communities the information they need to ensure good teaching and learning in mathematics. New tests are needed to measure the mathematics skills that the nation now knows are important for America's youth – those described in the "Curriculum and Evaluation Standards for School Mathematics" of the National Council of Teachers of Mathematics.

Mathematics teachers want tests that measure how well students apply computational skills to solve real problems and how well students use mathematics to reason, and to think about situations they will encounter in daily life. Mathematics teachers also want tests and accountability systems to help them realize the high expectations they, and the nation, have for the mathematics achievement of our youth.

The President and I salute the mathematics education community. It is proving that national goals based on world-class standards are possible in America without changing our legal practice of the states' responsibility for education and our traditional practice of local control of schools.

Furthermore, mathematics educators are showing that national standards need not homogenize us, establish a "national" curriculum, nor enforce such a curriculum with a single "national" test.

Such work in the other four core subjects is moving along more rapidly now that one successful model is under way.

Lamar Alexander became U.S. Secretary of Education in March. He is a former two-term governor of Tennessee and a former president of the University of Tennessee.

FIGHTING FOR OUR FUTURE

PART 1

A PLAGUE of NUMBERS

"I'm a people person, not a numbers person."

"All those equations give me a headache."

"I'm going to be a history teacher. Why do I need to study science?"

Such are the laments of a generation for whom fear of science and mathematics has become as commonplace as the fear of heights or dark places. Millions of people — children and adults alike — run from even the mention of things scientific or mathematical.

"We've always been told politics and religion aren't polite topics for dinner conversation," remarks Alexandria, Va., mathematician Bruce Anderson. "Well, bring up mathematics and see how fast the table clears."

This spreading aversion to mathematics — John Allen Paulos calls it "innumeracy," after the title of his 1988 best-seller — is the new agnosticism of our age. As a people, we accept that mathematics exists, but few of us seek to understand it.

"Innumeracy . . . plagues far too many otherwise knowledgeable citizens," argues Paulos, a professor of mathematics at Temple University and most recently the author of *Beyond Numeracy*. "In fact, unlike other failings which are hidden, mathematical illiteracy is often flaunted: 'I can't even balance my checkbook.' . . . Or 'I always hated math.' "

Not only math, but science, too, suffers from this willing ignorance. George Mason University's Robert Hazen and James Trefil have studied this phenomenon for years, with distressing results. "Every university in the country has the same dirty little secret," they write in their book *Science Matters*. "We are all turning out scientific illiterates."

SIGNS OF ILLITERACY

The signs of this scientific and mathematical illiteracy are all around us:

Item: Recent surveys show that a mere 5% of the American public is scientifically literate, down from 7% in 1979, and that, in math, most high school graduates have mastered no more than simple arithmetic.

Item: According to the latest national science and math tests, only 7% of high school seniors are prepared for basic college science courses, and only 5% for beginning college math.

FIGHTING FOR OUR FUTURE

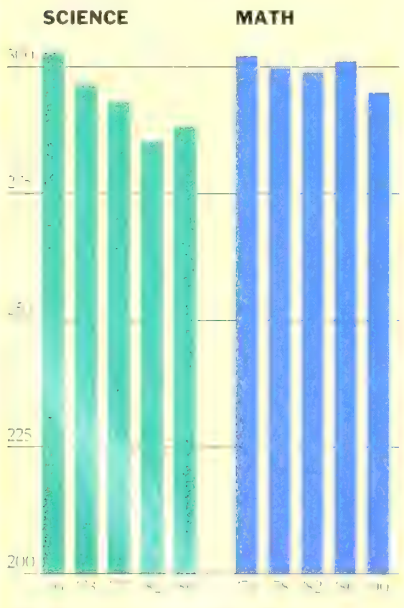
Item: Only 5% of high school seniors possess advanced mathematical problem-solving skills, and barely 6% of 11th-graders can draw conclusions from scientific data.

Item: More than half of high school graduates, says a report published this past July by the U.S. Labor Secretary's Commission on Achieving Necessary Skills (SCANS), also lack the sophisticated information-processing, communications, teamwork, and analytical-thinking skills that most of the coming decade's jobs will require.

Nor have the educational reforms of the past two decades done much to turn things around. Average science and math test scores have barely changed among the youngest students since the early 1970s, and are uniformly *lower* among high-school seniors.

Science & Math Report Card

17 YEAR OLD STUDENTS



SCIENCE: **200**-Simple Scientific Principles, **250**-Basic Applications, **300**-Analysis of Procedures

MATH: **200**-Beginning Skills, **250**-Beginning Problem Solving, **300**-Moderately Complex Reasoning

Source: National Assessment of Educational Progress

Nationwide, in not one state does the average eighth-grader now perform at grade level in mathematics. And on the Scholastic Aptitude Test, high school seniors' math scores in 1991 dropped for the first time since 1980, and have fallen to 24 points below their level a quarter-century earlier.

RISING SKILL DEMANDS

These numbers are frightening – and well they should be. Scientific and mathematical literacy, and the thinking skills these subjects impart, are no longer a workplace amenity. They are the hands and backbones of the future work force. A century ago, a farm or factory could hardly have hired a laborer lacking quick hands and a strong back. Today, employers can no more afford to hire workers who lack a quick mind and a strong grounding in science, math and problem-solving.

This principle clearly applies to fast-growing high-technology fields like computers, environmental science, and biotechnology. But it isn't just scientists and engineers who need to be proficient in these subjects. Science, mathematics, and problem-solving have become vital aspects of the education of every potential worker in the United States. Observes California Superintendent of Public Instruction Bill Honig in *Last Chance for Our Children*, "Math is integral to nearly every line of work – from the farmer determining what mix of crops to grow next spring to the urban planner predicting the rush-hour transportation load 15 years in the future or the laid-off factory worker training for a new job."

All told, according to the Hudson Institute's *Workforce 2000* study, the proportion of jobs requiring the equivalent of four years of high school mathematics will be 60% greater in the 1990s than it was in the 1970s, while the proportion where only rudimentary math skills are used will decline by as much as half. The need for scientific understanding will rise sharply as well.

THINKING FOR A LIVING

More than higher technical-skill levels will be needed for the future work force, however. As the SCANS report suggests, a different *type* of skills will be demanded: higher-order thinking skills.

> *"U.S. science and math education is a disaster area. The data are overwhelming documented in hundreds of reports."*
>
> **Leon M. Lederman**
> President, American Association for the Advancement of Science

"What firms need today," contends German industrial scientist Wolfgang Streeck, "are not just skills, but broad and unspecific skills; not just 'functional' skills dedicated to a specific purpose . . . but skills as a generalized . . . resource that can be put to many different and, most importantly, as yet *unknown* future uses."

This transformation in the nature of required thinking skills stems largely from the continuing spread of advanced technology. Such technology, it is often noted, makes workers more productive by allowing them to turn out more of a product or service in a given length of time. But that's only part of the story. New or enhanced technology doesn't just save labor, but routine, *thoughtless* labor.

A fully automated assembly line, for instance, permits an auto worker to spend less time attaching part A to part B and more time on quality control, while a computer-aided drafting program permits an architect to devote more energy to dreaming up town-

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r society is changing. So AT&T is ing a fresh approach to effect nge in our communities. We're get- g closer to the heart of society—the ily. By supporting a network of lth, social action and education pro- ms, we're helping to improve the quality ife for families, children, and ultimately everyone.

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ni Martinez's mother, Marianna, has ded to stay in school until she graduates. **Young Parents Resource Network** RN) is making that choice easier for anna and other teen parents in two ago communities.

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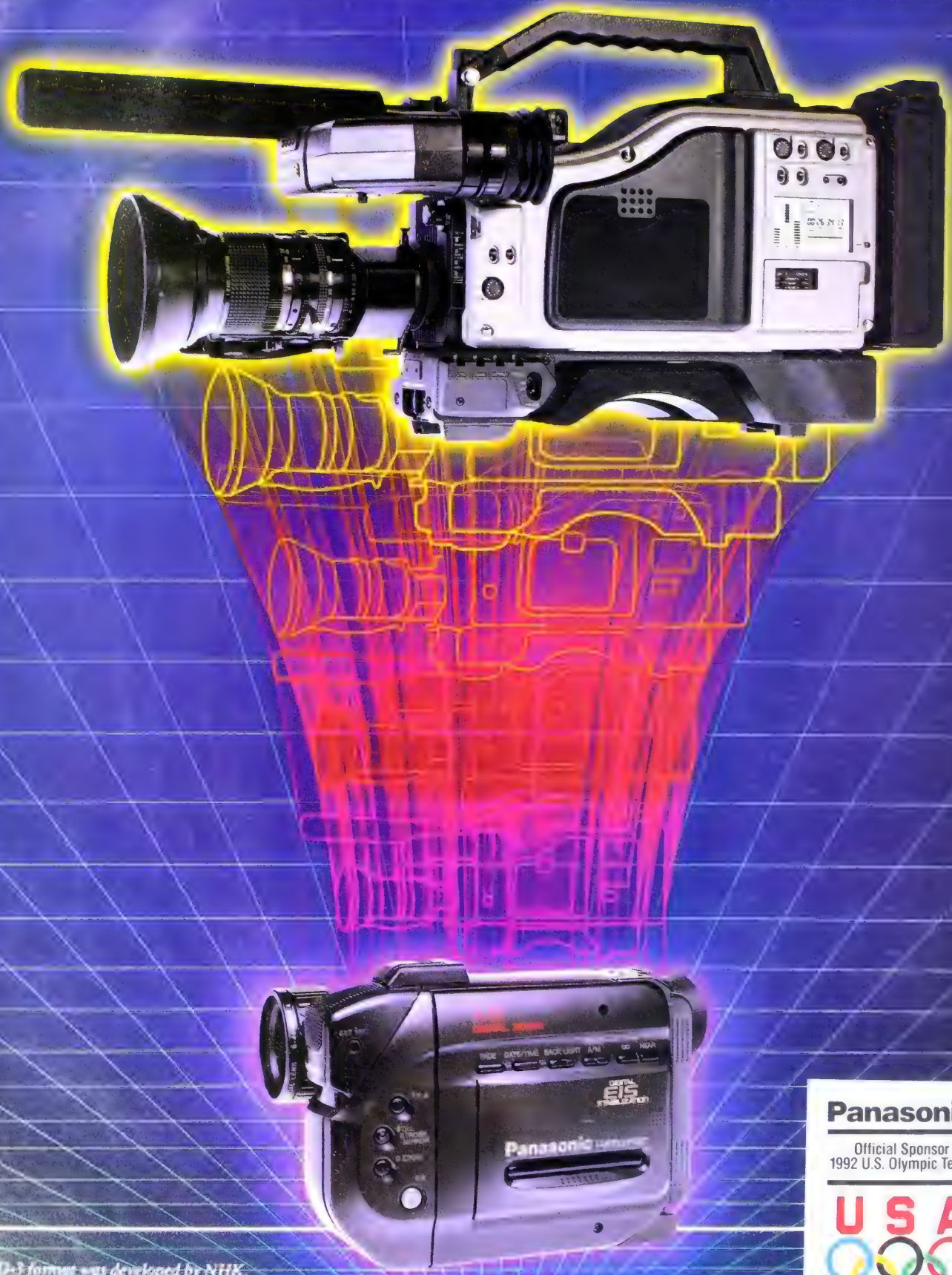

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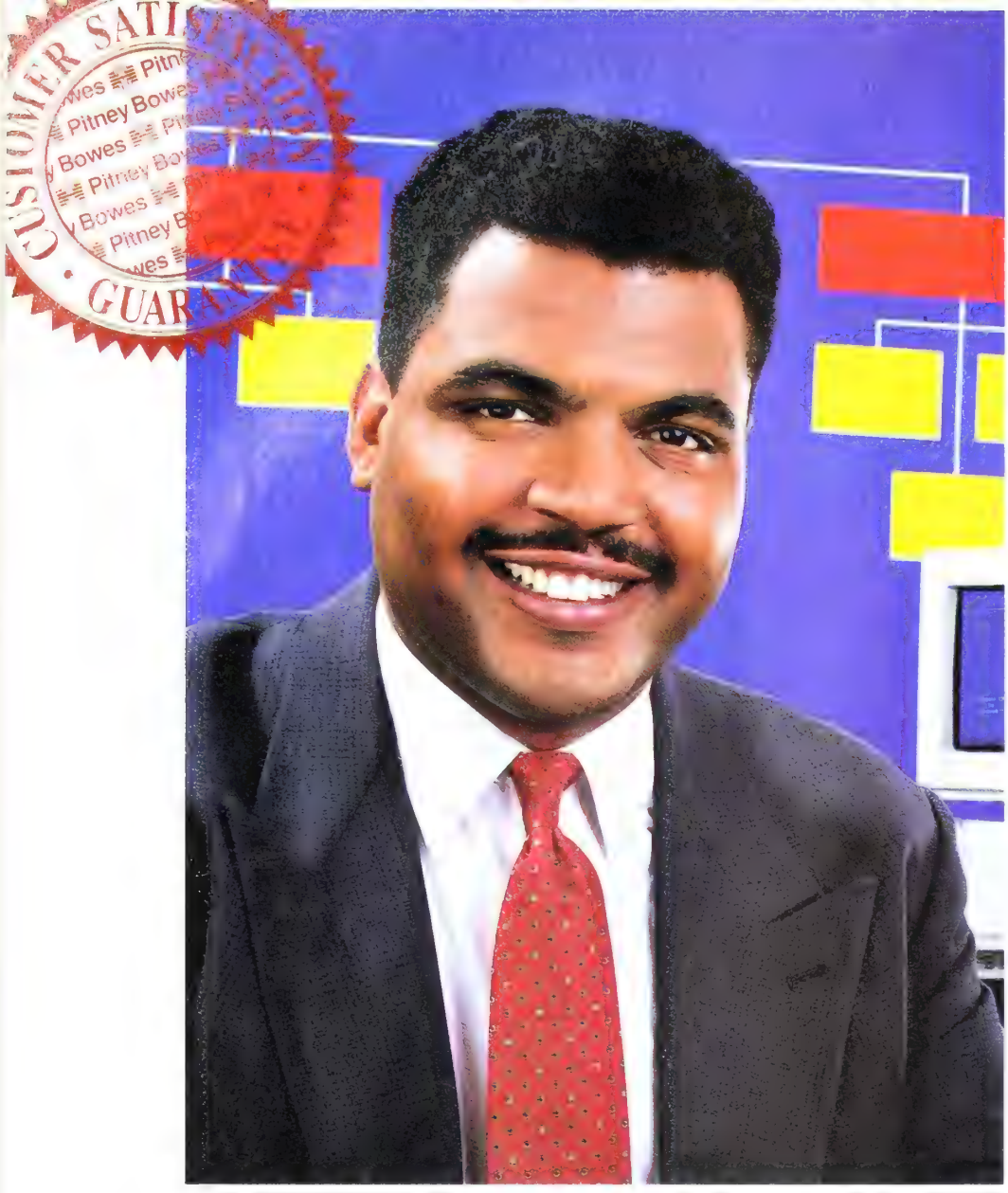

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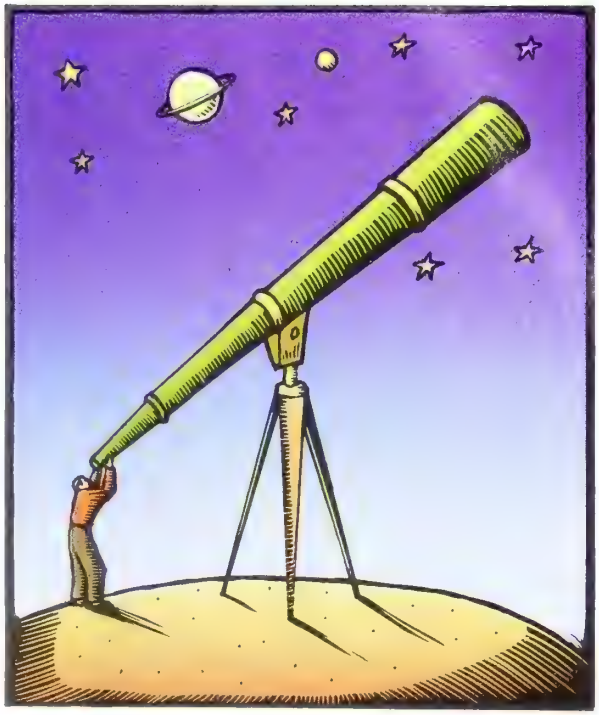


brainpower in the production process and those on the production line their physical strength and dexterity. No more. As Marc S. Tucker, president of the National Center on Education and the Economy, has put it in *The Wall Street Journal,* we must now become an entire "nation of people who can think for a living."

> *"Science and math are the fuel that drives America's economic competitiveness."*
>
> **Edward C. MacEwen**
> President, GTE Foundation

OUT OF THE RANGE

There is an even more pressing reason for this injunction than the state of technology: the state of the competition. Already, the United States is in a precarious position internationally — and matters are getting worse. Tests of students from at least a dozen countries and Canadian provinces place U.S. youths ninth (of 13) in physics, 12th (of 14) in chemistry, and dead last in biology and mathematics. Fully one-half of Japanese high-schoolers can perform mathematics that a mere 5% of U.S. students can. As University of Chicago sociologist James Coleman, one of the nation's foremost education experts, has observed, the United States is simply "out of the range" in these academic areas in among the industrialized nations.

How can American business continue to compete with overseas firms whose work forces are so much more technically and intellectually proficient? The answer is, it can't. If the information-age economy demands workers who think for a living, and a large majority of new employees *cannot* think with the speed, flexibility, and creativity that most new jobs will require, then U.S. firms will not be able to match the competition.

It's that simple. If the quality of companies' most important productive *input* continues to erode, so will the quality of their *output.* The resulting loss of America's competitive edge may not be swift nor immediately noticed, but it will be nonetheless certain. And because it takes at least two decades to grow a new, intellectually adept worker, falling behind will be a virtual guarantee of something else: a guarantee of *staying* behind, perhaps for good.

That is the real cost of our scientific and mathematical illiteracy. It's the reason why American business, faced with this predicament, truly is "fighting for our future." ■

ONE CLASSROOM AT A TIME

If elementary-school mathematics instruction is going to survive to meet the demands of the 21st century, it will be people like Patricia Kenschaft who make the difference.

Kenschaft, a professor of mathematics at Montclair State College in Upper Montclair, N.J., is director of the Project for Resourceful Instruction of Mathematics in Elementary School (PRIMES), now operating in nine New Jersey school districts. But that's just her official title. Kenschaft is really an insurgent, a blunt-spoken guerrilla leader in the war against what she calls the "drill and kill" mathematics of the traditional elementary-school curriculum.

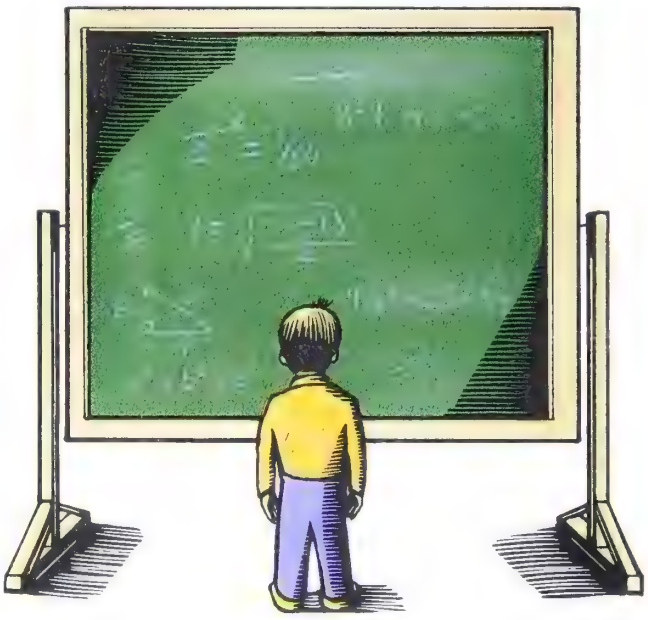
"Mathematical illiteracy in our young people is extremely serious, probably much worse than the test scores indicate," Kenschaft says. "I've seen whole classes of fifth-graders who can't tell the difference between one-half and one-third."

The problem, she explains, is that "most kids today don't learn the fundamental concepts of what numbers are or why they're important. If kids don't understand the meaning of '3,' " she says, "endlessly drilling them in '5 + 6' does nothing but drive them away."

'TEACH US MATH!'

While many children come to school grievously unprepared for learning math, Kenschaft places a large share of the blame for poor math achievement on the educational establishment itself. She points to research by Elizabeth Fennema at the University of Wisconsin showing that most kids in Madison, Wis., schools were better mathematical problem-solvers at the *beginning* of first grade than at the end.

"Children," Kenschaft contends, "just aren't being taught K-3 math in a decent way. So they don't learn. And if they don't understand these basics by fifth grade, there's almost nothing I can do to reach them."



One of the main causes of this inadequate instruction, Kenschaft believes, is the existence of "a whole cadre of early-elementary teachers who don't know the math they're expected to teach, and don't have the financial or political support for learning it."

Indeed, virtually none of the K-3 classes she's visited has had a well-prepared math teacher. One reason: No state requires more than 12 credits, or four college courses, for teaching elementary-school math. Some states require *zero* credits.

"I've spoken to captive audiences of elementary-school math instructors screaming for help — people who spontaneously begin chanting 'teach us math!' " And what do their schools do? Most often, she says, they demand that teachers pay for any advanced training in math themselves — as if the teachers alone will benefit.

AN OBVIOUS JOY

Professor Kenschaft believes a news media that often trivializes the importance of mathematical knowledge — helps to nurture an educational system that allows such academic atrocities to persist. But through PRIMES, Kenschaft and program originator Louis Giglio are trying to turn that situation around, one classroom at a time.

Acting as mathematical teaching consultants, Kenschaft or one of her colleagues visits early-elementary classes an average of once a week to lecture on topics that are causing teachers or students difficulty. On one occasion, Kenschaft spent a full 30 minutes examining the concept of "betweenness," until students, who had no idea what it meant to say "5 is between 4 and 6," finally realized that each number represents a different quantity — an essential prerequisite to understanding addition and subtraction.

Beyond these demonstration lessons, Kenschaft and her colleagues help teachers explore a variety of effective instructional techniques, including numerical game-playing, cooperative studying, writing and talking about math, and requiring students to take responsibility for their own rote learning. Most importantly, she urges teachers to "provide their classes with challenging, interesting problems — then give the kids enough time to solve them — so they learn to tolerate frustration, and learn that patience is worthwhile."

The approach clearly pays off. In one surburban district using these new methods, average math-test scores jumped 10 percentiles in a single year. In another district — in inner-city Newark, N.J. — economically disadvantaged third-graders are now achieving near the fifth-grade level.

But there's an even more heartening result than higher test scores, Kenschaft says. It's the "obvious joy" that teachers and students exposed to these methods begin to take in mathematics — often for the first time. ■

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A CALL TO NUMERACY

By John Allen Paulos

It would be funny, if it weren't so sad. Every other week, it seems, a new report on the dismal mathematics performance of American students is announced by some distinguished commission. Perfunctory expressions of alarm pour forth, after which the subject is promptly forgotten — until yet another, more alarming report is issued.

Breaking the inertial cycle will not be easy. Too many of us don't consider mathematics to be all that important. Pious lip service aside, few in America appreciate the pervasive nature of mathematical thinking and its value to the social and economic future of our country.

WHY STUDY MATH?

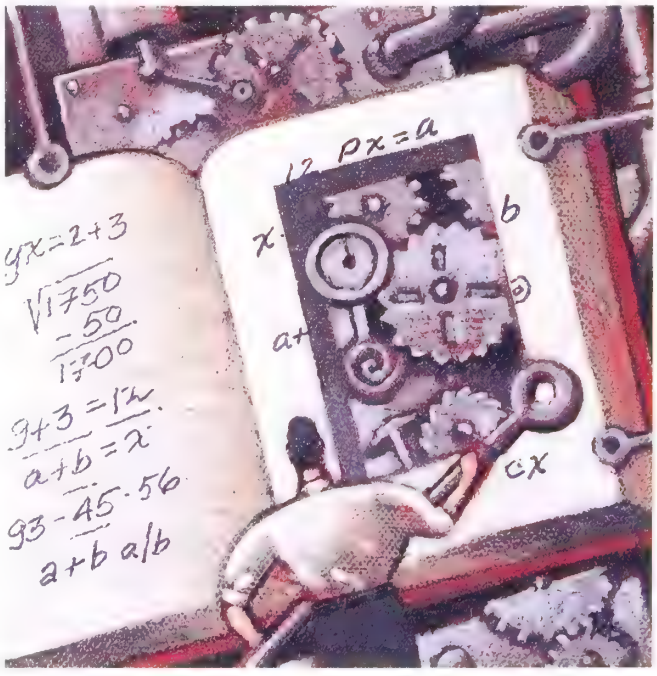
One occupational hazard of being a mathematician is that I'm often challenged to come up with practical reasons to study mathematics. The word "practical" is slippery, of course, but to most people, "practical" means economically useful. And it is.

Arithmetic is indispensable to commerce and business competitiveness; this has been true from prehistoric tally systems through double-entry bookkeeping to modern spreadsheets. Calculus and differential equations have been essential to most fields of science and engineering from their Newtonian inception in the 17th century. Statistical notions are necessary for quality control, scientific inference, and economic research.

This rough overview is familiar. Less familiar are the myriad interconnections among mathematical ideas and applications. The exponential function, for instance, describes the growth of money in an interest-bearing account and the proliferation of bacteria in a petri dish as well as the decay of radioactive uranium and the decline in the taste of a stick of gum. (Unfortunately, the half-life of the latter is shorter than that of the former.) Benoit Mandelbrot's fractals provide a trendier instance of a ubiquitous mathematical idea. These odd shapes can be used to characterize jagged coastlines, the rough bark of trees, the fluctuations in commodities prices, the spongy interiors of lung and intestinal tissues, and the many other contours in nature that have characteristic zigzags at virtually every scale one examines.

WORKERS, CITIZENS, HUMANS

We could go on indefinitely with such mathematical applications, but I think it's important to emphasize the non-economic reasons to study the subject as well.

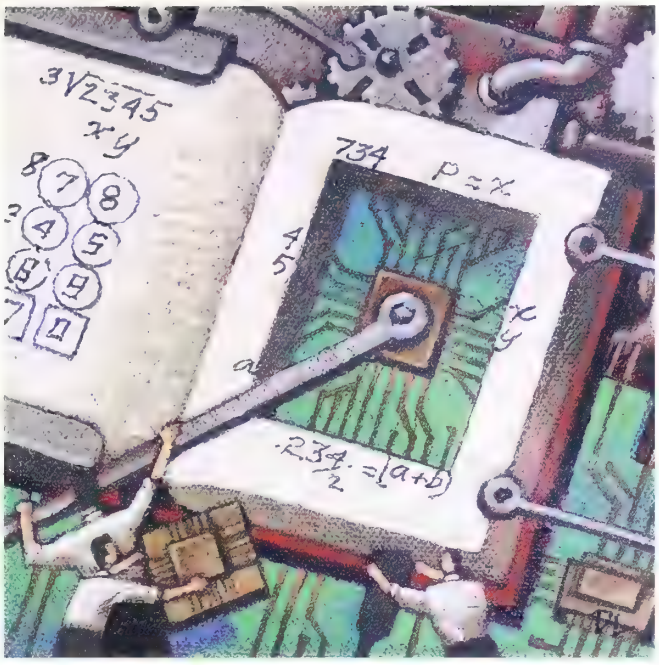


ILLUSTRATIONS BY DARRYL L. GASAN

These concern comprehension of those mathematical ideas essential to an informed and effective *citizenry* — basic numerical skills, including an ability t estimate magnitudes, and a grasp of probability, statistics, and risk assessment. They also involve considera tions of *curiosity, beauty, pla fulness, and wisdom.*

The dollars and cents co of mathematical ignorance measured, in part, by peopl who, though they can mul ply and divide, don't know when to do one or the oth cashiers who are flummoxe by discounts and sales taxe photographers who can't calculate correct ratios and proportions, nurses who have difficulty determinin appropriate dosages, and quality-control managers who don't understand simple statistical concepts. A shortage of mathematically talented individuals is also primary factor in the U.S.'s declining world position in many new scientific technologies, among them fuel-efficient engines, optical glasses, industrial instrumen tation, laser devices and ele tronic consumer goods.

The social costs of our mathematical naiveté are harder to gauge, but surely demagogues yearn for people who can't recognize trade-offs between higher speed limits (more econom cal transportation) and lower ones (fewer highway deaths); who lack a visceral feel for the difference between millions of dollars for some cultural project and hundreds of billions of



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anything but the sim-

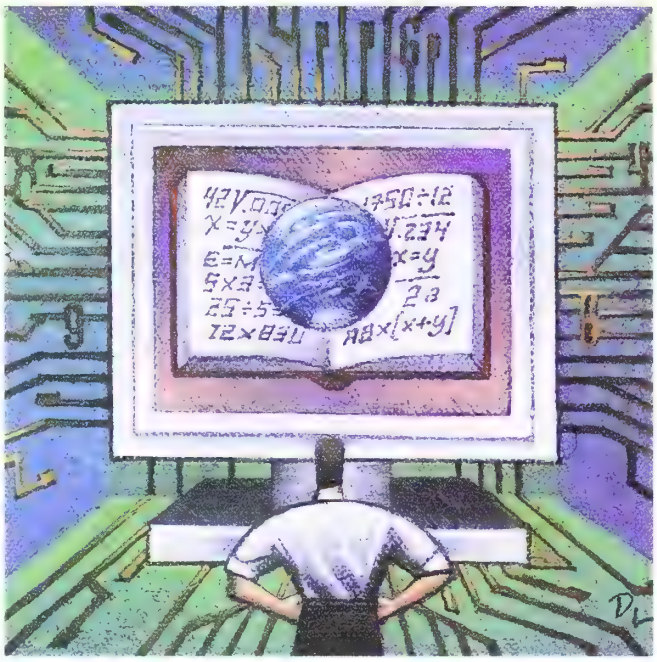
plest of problems, rarely estimate or compare magnitudes, and, most troubling of all in a free society, hardly ever develop an analytic, skeptical attitude toward numeric, spatial, and quantitative data or conclusions. Can anyone argue that these abilities are irrelevant to America's future?

Another misconception about math is that it is strictly hierarchical: First comes arithmetic, then algebra, then calculus and differential equations, followed by abstract algebra, complex analysis, and so on. There is undoubtedly a cumulative aspect to certain parts of mathematics, but it is less significant than many think. I find that I can often explain difficult new notions in probability, topology, or set theory to people who might have difficulty determining what percent 20 is of 45. Invariably, these self-styled innumerates attribute their insights to elementary logic or to common sense, steadfastly reserving the term "mathematics" for routine computation. Sometimes their unwarranted belief in hierarchy extends to speed of computation, and they exchange curious glances when I'm slow at the ultimate mathematical task: totaling the restaurant bill and adding 15% to its sum.

A third misconception concerns what, for lack of a better term, I'll call story-telling. An effective educational tool since ancient times, story-telling puts the subject into context, exemplifies its limitations, and succinctly lays out some salient idea. The mistaken view that math and narrative are disparate activities may explain why this obvious approach is rarely employed in mathematics education. Yet if teachers first illustrated and imbedded the mathematics in one or two familiar contexts (lotteries, sport records, puzzles, and the like), most students would see the subject to be a natural extension of logic and common sense. Mastering tables, formulas, and algorithms thus would acquire a rationale: the techniques employed are merely a mechanical means to a solution.

Parental expectations can be effective in thwarting the effects of the next misconception: the notion that only certain eccentric "nerds" have an aptitude for mathematics. Although it is undoubtedly true that some people have considerably more mathematical talent than others, mathematics is not only for the few. There are similar disparities in writing ability, but people rarely advise students to forget their English and literature courses because they're never going to be journalists or novelists. The truth is that almost everybody can develop a working knowledge of numbers and chance, of logic and relationships, of graphs and rates of change, and of the considerable role these notions play in ordinary life as well as in business.

The last misconception is the annoying romantic belief that a concern with numbers anesthetizes and so renders one unresponsive to, say, the majesty of mountain meadows. Too many people presume that life and love are somehow opposed to numbers and details. The words "humane" and "calculating" are deemed to be contradictory. Many even feel that mathematics limits freedom and self-expression. Sentiments like these are as commonplace as they are baseless, and lead indirectly to bleak test scores. Teachers and schools can't function effectively in such an anti-intellectual environment, but, once again, parents can



help immunize their children from such attitudes.

REMEDIES

One inexpensive remedy for the distaste many people have for mathematics is to reduce arithmetic and computational drills to their proper subordinate place in the curriculum. Mathematics is a way of thinking, but you'd never guess it from the way the subject is frequently taught. From arithmetic worksheets containing hundreds of multiplication problems to algebra assignments requiring that pages of polynomials be factored to calculus lessons comprising countless functions to differentiate, there is an almost exclusive focus on the mechanical and the routine.

There is no need for this. We have inexpensive calculators that take much of the drudgery out of computing and free up time for more conceptual matters. Likewise, we have computer programs that solve simple differential equations, invert matrices, determine standard deviations, graph surfaces, and perform many other spirit-sapping and mind-numbing procedures that still occupy so much of the traditional mathematics curriculum. We should utilize these technological learning tools so that students can concentrate on understanding and problem-solving, inference, and analysis.

Other, more specific curricular changes are called for. More stress should be put on the connection between mathematics and other subjects — and not just the physical sciences. Math's association with music from Pythagoras' harmonics through Bach's tight symmetrical patterns to John Cage's aleatoric sounds, for example, should not be kept a secret. Neither should the uses and manifestations of the exponential function and the fractal shapes cited earlier. There also must be more integration among the various mathematics subdisciplines. Algebra is not, after all, totally unrelated to analytic geometry or probability. Topics should be revisited at different grade levels in an upward spiral of difficulty. How mathematics arises naturally in everyday contexts ranging from tomographic imaging in hospitals to bar codes in supermarkets should be highlighted.

Key courses such as algebra in high school or calculus in college must cease acting as fine meshes, screening out all but likely mathematics and science majors. They should begin serving as catalysts inciting more students to go on. I'm not recommending that standards be lowered, but rather that expectations be raised. Expectations are crucial, and they are abysmally low in this country.

We should increase teachers' training and salaries. There are many superb mathematics teachers, but there simply aren't enough of them. Successful training programs and educational experiments undertaken in Chicago, Philadelphia, and many other locations should be expanded. More generally, inducements must be found to nudge more teachers away from the traditional priestly/militaristic model of instruction: the teacher standing in front of the class and imparting the Truth to students, who properly record it and then do innumerable, almost identical exercises based upon it — usually with a high premium on speed.

We should urge students to work collaboratively in groups of three or four, both in class and on homework. (University of California Professor Uri Treisman and others have had particular success with minority students using this technique.) Where appropriate, physical demonstrations and computer simulations should be conducted or suggested. Discussions, alternate approaches, and written essays should be invited and assigned. Data from some real-life situation, for example, could be given to students who would be pressed to come up with as many hypotheses as possible that are consistent with the data. Or students might be presented with a survey showing that children with bigger feet spell better and then be asked to decide, among other things, if the correlation is causal or not. (It's not; children with bigger feet do spell better, but only because they're older.) To summarize, *thinking* and *reasoning* should be encouraged.

Mathematics and science education must undergo a *perestroika* of sorts. Whether in the classroom or in the executive suite, we must realize that we're not educating party *apparatchiks* who will mechanically carry out routine directives, but free men and women who will need to make practical, creative sense of the burgeoning complexities of the 21st century if American democracy and its supporting economy are to flourish. ■

A professor of mathematics at Temple University in Philadelphia, John Allen Paulos is the author of the best-seller "Innumeracy" and, most recently, "Beyond Numeracy – Ruminations of a Numbers Man."

N EDUCATION PROGRAM
VITH IMPACT

Montgomery County,
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ticipates in the program.

Project IMPACT currently operates at the K-2 levels in three mostly low-income Montgomery County schools with heavy minority enrollments, and will expand to the third grade in 1992-93. Based on the premise that exposure to mathematics should begin as early as possible, the program introduces children to math in a variety of familiar contexts that build on the natural "number sense" that even the most educationally deprived kids usually possess. Instructors then "teach for understanding," making sure each student has mastered concrete examples before moving on to potentially confusing abstractions.

PHOTO COURTESY OF PROJECT IMPACT

ergarten children solve everyday math problems in a ct IMPACT classroom.

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capabilities of children
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'NO BETTER WAY TO TEACH'

The heart of Project IMPACT, however, is its teacher-training component. During the two summers before the program is brought into a school, elementary-level teachers receive sophisticated instruction in key mathematics topics as well as in effective math-teaching techniques, such as searching for patterns, solving everyday problems, using manipulative materials (sticks, geometric shapes), and verbalizing one's mathematical reasoning procedures. Because these courses are held at sites with summer-school programs, teachers also have the chance to practice the new teaching methods on small groups of children before using them in their own classes.

At the end of the course, project supervisors assist teachers in developing lesson plans for the first few weeks of the school year. But most critical to the project's success may be what happens *after* school has begun: the placement of a full-time math specialist in each participating school. The math specialist not only observes classes and helps out with the children as needed, but meets with all teachers for one hour a week to aid in planning classroom activities and resolving any teaching problems.

In just a short time, the teachers have grown as enthusiastic about this approach as program administrators are. "Before our first summer of training, lots of teachers were very nervous and unsure about whether they could or wanted to do what we were asking them to do," recalls Dr. Honi Bamberger, the math specialist at New Hampshire Estates elementary school in Silver Spring, Md. After a year's experience, though, the teachers "were so excited by what the children were learning that they became convinced there was no better way to teach mathematics."

TALKING ABOUT MATH

One of the central tenets of this teaching philosophy is that there is no one "right way" to do math problems. Thus, on the first day of class this year, one teacher informed her second-graders there were 11 boys and 8 girls present, and she asked them to figure out the total number of children in the class. But instead of having them report only their answers, the teacher asked them to explain in detail how they solved the problem. From the first four students she called the teacher heard four correct answers—and described four different problem-solving techniques.

As a result of in-class discussions like these, says Dr. Patricia F. Campbell, the University of Maryland associate professor who directs Project IMPACT, children learn a variety of ways to approach math problems, which makes them much more comfortable with math from the outset.

While it will be years before the program's long-term effects on children's math skills can be determined, the improvement that Project IMPACT produces in teachers' *instructional* abilities demonstrates at least this much: This isn't the kind of math education that should long be kept confined to a few hundred students in a single Maryland county. It's the kind of top-notch education that *every* young student in the country should receive. ■

CHALLENGER CENTER FOR SPACE SCIENCE EDUCATION

The Mission Continues

America has always been a nation of explorers and discoverers—pioneers seeking new frontiers. That pioneering spirit has shaped our past, and it will shape our future. If America is to thrive in its third century of freedom, we must rekindle the pioneering spirit among our young. At the Challenger Center for Space Science Education, that is our mission.

Challenger Center brings young people on a pioneering voyage in futuristic settings where they explore space but discover themselves. Through Challenger Center, they experience a bright vision of tomorrow where math, science, and technology are tools of human betterment. They learn that problems are amenable to human solutions and that individual human energies do make a difference.

And for those youngsters who are the most disadvantaged, the voyage holds the greatest rewards: skill, success, and self-esteem.

When the crew of the space shuttle *Challenger* perished in January 1986, they were on their own pioneering mission—to extend the boundaries of human knowledge, to teach, and to inspire. With the generous support of our friends in the corporate community, Challenger Center is continuing that mission, by helping to prepare America's future citizens for their exciting lives in the 21st century.

THE HONORABLE
JUNE SCOBEE RODGERS, Ph.D.
Founding Chairman, Challenger Center
for Space Science Education

The countdown begins: 10 . . . 9 . . . 8 . . . 7 . . . The visitors' attention is riveted on the illuminated digits as they descend toward zero. But inside the space station, the countdown clock sits unwatched. The crew members are absorbed in their own work, vital tasks that will determine whether the launching of the space probe into the tail of the Comet Halley is a success.

Around the station, control panels flash and buzz. A team of technicians huddles near the launch bay, completing a final visual inspection. Conversation comes intermittently, and then only in hurried phrases, over the click of switches, the whine of motors, the rhythmic tapping of computer keys.

Back at Mission Control, the ground-based launch team studies a bank of computer screens, searching for any last-minute warning signs. The navigation officer announces lock-on to the final target coordinates. The Mission Commander stands nearby, ready to offer advice or instructions.

The countdown continues: 3 . . . 2 . . . 1 . . . . And then: *silence*. Inside the space station, all activity stops . . . as the crew members turn to watch the monitors. In seconds, the silver probe glides into view, free of its moorings, arcing toward the comet against the black of deep space.

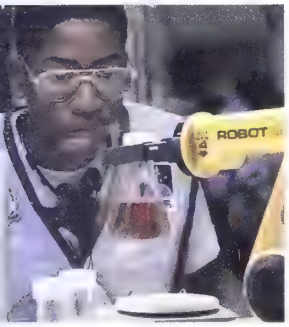
A voice from the back of the room finally breaks the silence, exulting proudly, confidently, joyously: *"We did it!"*

A TRUE EDUCATION PROGRAM

The scene might be drawn straight from the Johnson Space Center in Houston, or from a U.S. space station early in the next century. But the time, in fact, is now, and the participants aren't veteran astronauts or seasoned space engineers. They are middle-school students in the heartland of America, embarking on their first space voyage — a mission that, for some, may be the launching pad for a lifetime of work in math and science.

"Rendezvous with Comet Halley in 2061," which takes place several times a week at Challenger Learning Centers around the country, is the most awe-inspiring of the education programs developed by the Challenger Center for Space Science Education, with headquarters in Alexandria, Va. Not to be confused with Space Camp or the Young Astronauts Program, other popular space-related activities for

***Challenger* flight *51-L* crew members.**



allenger Learning Center, yton, Ohio

ung people, Challenger earning Centers are class-om-based education pro-ams that use the mystery d excitement of space as a hicle for encouraging udy and achievement in ath and science.

The learning centers oper-e according to the principle "learning by doing." hrough two-hour space-ght simulations, which also clude "Return to the Moon" d the forthcoming "Mission Planet Earth," a global-envi-nment scenario, the learn-g centers allow middle-hool students to experience space mission from the van-ge point of the scientist, gineer, or space technician. For this brief period, the youths literally become these professionals — and the decisions they make during this time determine their mission's success, just as their counterparts' decisions do in the real world.

As a result, young people discover how critical "book learning" can be, and realize that it *is* possible for them to master the academic subjects needed to prepare for exciting careers. "Giving a young person a sense of having succeeded at something, and feeling the pleasure of asking a question, doing an experiment, and getting an answer," says Dr. June Scobee Rodgers, Challenger Center's founding chairman, "is probably one of the most valuable seeds you can plant in a classroom" where math or science is being taught.

The effect of this experience, however, can extend far beyond the classroom. Says Dr. James Rowley, director of the organization's Dayton, Ohio, learning center: "For a child to successfully build a probe, to work with electronics components, to put something together and see it work, and then actually see it go out and into a comet — who knows? That might be the experience that says to them, 'Gee whiz, [so that's] what engineers do. I really like this. Maybe that's what I want to be.' "

THE LEARNING CENTER NETWORK

Born out of tragedy, the Challenger Learning Center network is a triumph of the human spirit. Less than three months after the *Challenger* shuttle accident in 1986, the families of the seven-member crew had joined together to ensure that their loved ones' educational mission would continue — and that it would begin anew in the hearts and minds of the nation's youngest citizens.

Challenger Center's Founding Directors vowed to create a network of learning centers throughout the country to help promote this goal. Development of the first of these centers, in Houston, proceeded swiftly — thanks to support from the Texas-based Farish Foundation and the Houston Museum of Natural Science. By August 1988, the Houston center had opened, and students of all ages were soon flying missions on the space station "U.S.S. Legacy," one of the most complex and realistic educational simulations ever devised.

"America's space program has always been a source of national pride and positive motivation, especially for our young people. The Challenger Center uses space as a tool for an exciting new method of teaching that makes the study of science and math both interesting and practical."

DONALD R. BEALL
Chairman & CEO, Rockwell International

PHOTO COURTESY OF NESHAN NALTCHAYAN

1989 Challenger Center Benefit Dinner, Washington, D.C.

Less than a year later, the second learning center was completed in Maryland's Prince George's County, near Washington, D.C. The organization had now made it possible to replicate a self-contained learning center for as little as $500,000 — and this low price tag, combined with the early successes of the Houston and Prince George's County centers, caused educators' interest to soar. By early 1991, the Learning Center Network had grown to six sites, and was expected to reach 15 by year-end 1992. Nearly 20 other applications are currently under consideration, and the first international site, in Canada, opens this month.

TWO KEY INGREDIENTS

As popular as Challenger Learning Centers and the national headquarters' related education activities have become, they never could have gotten off the ground without two key ingredients: a dedicated National Faculty and continuing financial support.

Challenger Center's National Faculty owes its origins to the Teacher-in-Space Foundation, whose members included the 113 finalists in NASA's Teacher-in-Space Program that was to have culminated in the flight of the space shuttle *Challenger* in January 1986. Just over a year later, the foundation officially merged with Challenger Center, and its teacher-members became Challenger Center's ambassadors to teachers interested in participating in the center's programs.

Challenger Center's financial base solidified a year after that. In 1988, the U.S. Congress granted Challenger Center $1 million a year over the succeeding 10 years, drawn from the Science, Space and Technology Education Trust Fund. Since that time, the organization has received programmatic support from the National Aeronautics and Space Administration (NASA), and continuing financial support from corporations, foundations, and individuals.

Laurence Adams, Challenger Center's chairman, acknowledges that this financial support has been critical to the organization's rapid expansion. Challenger Center, he says, "really took off with a matching gift of $1 million from The Freedom Forum" (formerly the Gannett Foundation).

Rockwell International also chipped in with a generous, early contribution, and was quickly followed by other industry leaders, including IBM, Martin Marietta, Thiokol, Marriott, Bell Atlantic, and NYNEX. Apple Computer also helped out by contributing the computer equipment for the original Challenger Learning Center in Houston and GTE and Signet Bank and United Technologies funded learning centers in Tampa, Fla., Richmond, Va., and Bridgeport, Ct.

MISSION TO MARS

These contributors have been rewarded with seeing their dollars translated into an unprecedented science education for literally hundreds of thousands of young people. To date, more than 100,000 students and teachers have "flown" in Challenger Learning Center sin ulations, and Challenger Center hopes to make this same experience available some 500,000 students pe year by the end of 1995.

The center's other goals are equally ambitious. The include: teaching millions new students annually through satellite teleconfe ences; creating innovative curriculum materials and scenarios for use in 17,000 classrooms and all Challenger Learning Centers each year; and instructing 5,000 teachers annually in center-led workshops.

In addition, the center just last month inaugurate 10-month-long program en tled "Marsville: The Cosm Village," which is expected ultimately to involve midd school children from the United States, the Soviet Union, Europe, Canada, an Japan. Working together ing regional meetings, stu dents and teachers will co erate in planning and con structing a simulated Martian community calle "Marsville" — the first hu settlement in outer space.

Then, at the program's August 1992 internationa conference, Marsville parti pants will hold what will amount to the "First Con tutional Convention of Mars." There, they will ma unprecedented decisions to Martian laws, official la guage, public infrastructu environmental protection and diplomatic relations v Earth — just as the first Martian colonists early in next century will have to

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enger Learning Center, Houston

"The mission of Challenger Center is to spark in our young people an interest–and a joy–in science. A spark that can change their lives–and help make American enterprise the envy of the world."

PRESIDENT GEORGE BUSH
Challenger Center Benefit Dinner
October 4, 1989

NG LEARNING FUN

or all its projects, the rpiece of the Challenger er's educational efforts ns the learning center light simulations. The ations' popularity stems nly from the realism of ttings and scenarios, so from their ability to education thrilling, tan- and fun.

t all the fun and excite- in the world would npty without real learn- and that's what Chal- Center's national quarters staff is most mined to provide.

spaceflight simula- are not merely one-day ement rides, but the one of weeks of class- study of math and ce geared to the mis- demands.

make this instruction ective as possible, enger Center national quarters supplies orien- and curriculum mate- hat aid teachers in ring students for the on, and that emphasize crucial behavioral skills as teamwork, cooperative learning, communication, and problem-solving along with the necessary facts and data about space exploration and the mission itself.

On launch day, the students arrive at their local Challenger Learning Center ready to be transformed into scientists and engineers. Prior to arrival, teachers divide students into eight mission teams, including navigation, life support, data, communications, and medical. It's an arrangement that not only makes continuous cooperation and communication essential to the mission's success but, on a more practical level, permits young people to become personally involved in a specific, responsible task.

Subsequently, in the days and weeks after their visit, students work with their teacher to analyze and apply the data gathered during the mission. Like astronauts returning to Earth, they sift carefully through their observations to determine what their mission achieved, and how that information can now be put to use for the betterment of humankind.

PHOTO COURTESY OF CHALLENGER CENTER

National Faculty members participate in teacher workshop.

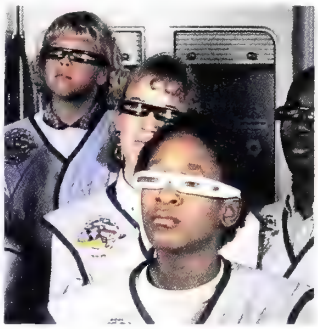
FIRST STEPS TO A CAREER

This linkage of the intense, hands-on activities of the spaceflight simulation with the more reflective classroom discussions and lectures is meant to foster a learning process that is "more than the sum of its parts," in the words of the center's latest mission statement. Using space as the backdrop, Challenger Center endeavors to create memorable experiences that will "excite students about the impact of technology on their futures, and inspire them to pursue math, science, and technology."

And it works: Early assessments of Challenger Learning Centers' programs are overwhelmingly positive. At the first learning center in Houston, fully 97% of young people who participated in a simulated mission said they would like to repeat the experience.

More persuasive than surveys, though, are the words of students themselves. Jovan Brown, a fifth-grader from Seabrook, Md., speaks for many of her classmates in relating her reaction to the Challenger Learning Center experience. "Before I came to the science center," she says, "I didn't really like science; but when I got to the science center it changed my mind. I really want to come back again."

PHOTO COURTESY OF CHALLENGER CENTER



Students participate in "Rendezvous with Comet Halley in 2061."

With continued support from the scientific, education, and business communities, Challenger Center officials hope to make it possible for many thousands of youngsters like Jovan Brown to come back so they can take their own, first steps into space — and, perhaps one day, into a lifelong career in math and science. ■

FIGHTING FOR OUR FUTURE

PART 2

The ABANDONED DISCIPLINES

The news was good. Enrollments in advanced math classes were up by a third from 1982 to 1987 . . . pre-calculus enrollments had doubled. Course-taking in biology had jumped from 75% to 90% . . . in chemistry, from 31% to 45% . . . in physics, from 14% to 20%.

So said the National Science Board in February of last year. Indeed, the board emphasized, there were greater [proportional] increases in course-taking in science, mathematics, foreign languages, and computer science than in [all] other academic subjects" combined.

The troubling blight of scientific and mathematical illiteracy, it seemed, was finally coming to an end.

Or was it?

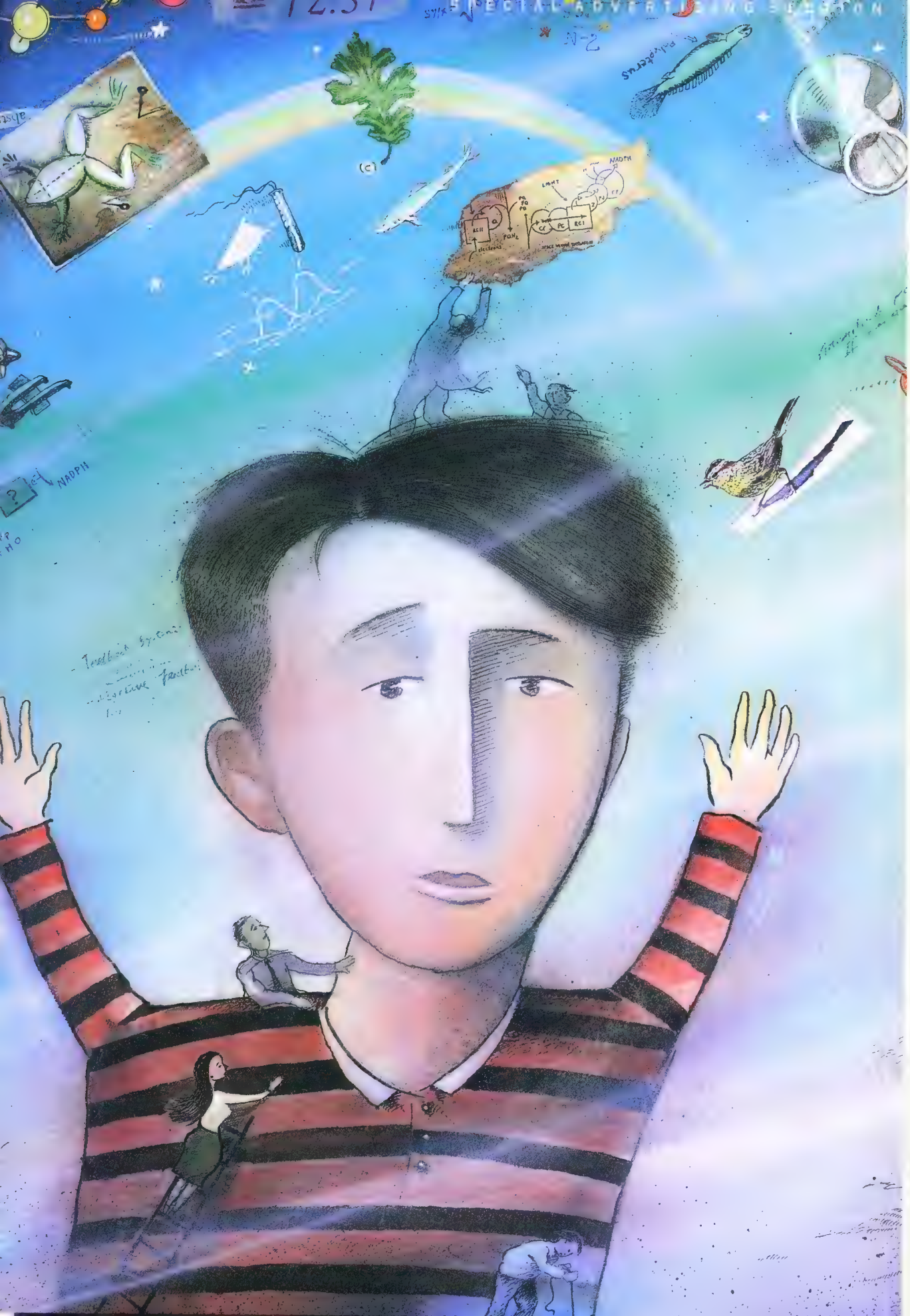
As it happens, there's less to the good news than first appears. Despite the gains, enrollment in advanced math and science courses remains pitifully small: 12% in pre-calculus, 6% in calculus, and no more than 3% in advanced-placement or honors calculus, biology, chemistry, or physics.

Similar patterns exist in elementary and middle school. Most third-grade teachers spend two hours a week or less teaching science – less time than most devote to maintaining order in the classroom. Even in seventh grade, half the teachers teach science for no more than three hours a week.

It's worth recalling, in this connection, the findings of the National Commission on Excellence in Education in 1983. "In many other industrialized nations," the commission wrote in *A Nation at Risk*, "courses in mathematics (beyond arithmetic), biology, chemistry, physics, and geography start in grade 6 and are required of all students – the time spent . . . on these subjects is about *three times* that spent by even the most science-oriented U.S. students." The increases in math and science course-taking since then have done little to correct this imbalance.

COURSE-TAKING AND PROFICIENCY

But there's more to worry about than limited class time: many achievement test scores in science and math have been stagnant or fallen even as students have taken more courses. Great exposure to these topics evidently has not translated into increased science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Glucose
Pyruvate
Acetyl CoA
Citric acid cycle
Glycolysis
Fermentation
Aerobic respiration
Anaerobic respiration
Mitochondrion
Chloroplast
Cell membrane
Cell wall
Nucleus
Ribosome
Endoplasmic reticulum
Golgi apparatus
Vacuole
Cytoplasm
Cytoskeleton
Microtubule
Microfilament
Centriole
Flagellum
Cilium
Vesicle
Lysosome
Peroxisome
Plasmodesmata
Tonoplast
Guard cell
Stomata
Xylem
Phloem
Vascular bundle
Root hair
Epidermis
Cortex
Endodermis
Pericycle
Meristem
Apical dominance
Auxin
Cytokinin
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Ethylene
Tropism
Phototropism
Gravitropism
Thigmotropism
Hydrotropism
Chemotropism
Nastic movement
Photoperiodism
Vernalization
Short-day plant
Long-day plant
Day-neutral plant
Critical night length
Phytochrome
Pr
Pfr
Seed dormancy
Germination
Imbibition
Scarification
Stratification
Cotyledon
Endosperm
Embryo
Seed coat
Micropyle
Radicle
Hypocotyl
Epicotyl
Plumule
Fruit
Pericarp
Ovary
Ovule
Pollen
Stamen
Carpel
Pistil
Anther
Filament
Stigma
Style
Petal
Sepal
Receptacle
Peduncle
Pedicel
Inflorescence
Flower
Pollination
Fertilization
Double fertilization
Pollen tube
Embryo sac
Megaspore
Microspore
Meiosis
Mitosis
Cell cycle
Interphase
Prophase
Metaphase
Anaphase
Telophase
Cytokinesis
Cell plate
Chromosome
Chromatid
Centromere
Kinetochore
Spindle fiber
Asexual reproduction
Sexual reproduction
Alternation of generations
Gametophyte
Sporophyte
Spore
Gamete
Zygote
Haploid
Diploid
Polyploidy
Genome
Gene
Allele
Dominant
Recessive
Homozygous
Heterozygous
Genotype
Phenotype
Punnett square
Monohybrid cross
Dihybrid cross
Law of segregation
Law of independent assortment
Incomplete dominance
Codominance
Multiple alleles
Sex-linked
Autosome
Karyotype
Nondisjunction
Trisomy
Monosomy
Translocation
Deletion
Duplication
Inversion
Mutation
Point mutation
Frameshift mutation
Silent mutation
Missense mutation
Nonsense mutation
DNA
RNA
Nucleotide
Adenine
Thymine
Guanine
Cytosine
Uracil
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Double helix
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Differentiation
Totipotent
Pluripotent
Stem cell
Cloning
Recombinant DNA
Restriction enzyme
Plasmid
Vector
Gel electrophoresis
Southern blot
Northern blot
Western blot
PCR
Genetic engineering
Biotechnology
Transgenic
Gene therapy
Genomics
Proteomics
Bioinformatics
Evolution
Natural selection
Fitness
Adaptation
Speciation
Allopatric
Sympatric
Reproductive isolation
Gene flow
Genetic drift
Bottleneck effect
Founder effect
Hardy-Weinberg
Fossil
Fossil record
Relative dating
Absolute dating
Radiometric dating
Half-life
Geologic time scale
Precambrian
Paleozoic
Mesozoic
Cenozoic
Cambrian explosion
Extinction
Mass extinction
Convergent evolution
Divergent evolution
Coevolution
Analogous
Homologous
Vestigial
Phylogeny
Cladogram
Taxonomy
Binomial nomenclature
Domain
Kingdom
Phylum
Class
Order
Family
Genus
Species
Archaea
Bacteria
Eukarya
Protista
Fungi
Plantae
Animalia
Prokaryote
Eukaryote
Virus
Viroid
Prion
Bacteriophage
Lytic cycle
Lysogenic cycle
Capsid
Envelope
Antibiotic
Resistance
Pathogen
Immune system
Innate immunity
Adaptive immunity
Antigen
Antibody
Vaccine
Inflammation
Phagocyte
Lymphocyte
B cell
T cell
Memory cell
Plasma cell
Cytotoxic T cell
Helper T cell
Regulatory T cell
Natural killer cell
Histamine
Complement system
Interferon
Cytokine
Autoimmune disease
Allergy
Hypersensitivity
Transplant rejection
Major histocompatibility complex
MHC
HLA
Blood type
ABO system
Rh factor
Blood transfusion
Hemoglobin
Red blood cell
White blood cell
Platelet
Plasma
Blood clotting
Thrombus
Embolism
Hemophilia
Sickle cell disease
Anemia
Leukemia
Lymphoma
Cancer
Tumor
Benign
Malignant
Metastasis
Oncogene
Tumor suppressor gene
Carcinogen
Chemotherapy
Radiation therapy
Immunotherapy
Stem cell therapy
Gene therapy
Personalized medicine
Pharmacogenomics
Epigenetics
Methylation
Histone modification
Chromatin remodeling
Noncoding RNA
Small interfering RNA
MicroRNA
Long noncoding RNA
Transposon
Retrotransposon
Horizontal gene transfer
Conjugation
Transformation
Transduction
Biofilm
Quorum sensing
Extremophile
Thermophile
Psychrophile
Halophile
Acidophile
Alkaliphile
Barophile
Radiophile
Xerophile
Hydrothermal vent
Cold seep
Deep biosphere
Subsurface lithoautotrophic microbial ecosystem
SLiME
Astrobiology
Exoplanet
Habitable zone
Goldilocks zone
Drake equation
Fermi paradox
Panspermia
Abiogenesis
Miller-Urey experiment
RNA world
Protocell
Last universal common ancestor
LUCA
Endosymbiotic theory
Mitochondrial Eve
Out of Africa
Human genome project
1000 Genomes Project
ENCODE
Human Microbiome Project
Metagenomics
Synthetic biology
Minimal genome
Mycoplasma genitalium
Synthetic cell
Xenobiology
Expanded genetic code
Unnatural base pair
Directed evolution
Protein engineering
Rational design
Combinatorial chemistry
High-throughput screening
Microfluidics
Lab-on-a-chip
Organ-on-a-chip
Tissue engineering
Scaffold
Bioreactor
Bioprinting
3D printing
Nanotechnology
Nanoparticle
Quantum dot
Biosensor
Wearable technology
Telemedicine
Big data
Machine learning
Artificial intelligence
Neural network
Deep learning
Computational biology
Systems biology
Network biology
Metabolic pathway
Signal transduction
Second messenger
Receptor
Ligand
Agonist
Antagonist
Enzyme
Substrate
Active site
Allosteric site
Cofactor
Coenzyme
Vitamin
Hormone
Endocrine system
Exocrine system
Pheromone
Neurotransmitter
Synapse
Neuron
Action potential
Resting potential
Myelin sheath
Nodes of Ranvier
Central nervous system
Peripheral nervous system
Brain
Spinal cord
Cerebrum
Cerebellum
Brainstem
Hypothalamus
Pituitary gland
Thyroid gland
Parathyroid gland
Adrenal gland
Pancreas
Insulin
Glucagon
Diabetes mellitus
Type 1 diabetes
Type 2 diabetes
Metabolic syndrome
Obesity
Homeostasis
Thermoregulation
Osmoregulation
Excretion
Kidney
Nephron
Glomerulus
Bowman's capsule
Proximal tubule
Loop of Henle
Distal tubule
Collecting duct
Urine
Urea
Ammonia
Uric acid
Digestion
Mouth
Esophagus
Stomach
Small intestine
Large intestine
Rectum
Anus
Liver
Gallbladder
Bile
Peristalsis
Absorption
Villi
Microvilli
Lacteal
Portal vein
Hepatic portal system
Respiration
Lung
Alveolus
Bronchus
Bronchiole
Trachea
Larynx
Pharynx
Diaphragm
Intercostal muscle
Tidal volume
Vital capacity
Residual volume
Oxygen dissociation curve
Bohr effect
Carbon dioxide transport
Circulation
Heart
Atrium
Ventricle
Valve
Aorta
Vena cava
Pulmonary artery
Pulmonary vein
Coronary artery
Coronary vein
Cardiac cycle
Systole
Diastole
Blood pressure
Hypertension
Hypotension
Arteriosclerosis
Atherosclerosis
Plaque
Stroke
Myocardial infarction
Heart failure
Arrhythmia
Electrocardiogram
ECG
Pacemaker
Sinoatrial node
Atrioventricular node
Bundle of His
Purkinje fibers
Capillary
Lymph
Lymph node
Lymphatic system
Thymus
Spleen
Tonsil
Appendix
Bone marrow
Cartilage
Bone
Osteoblast
Osteocyte
Osteoclast
Osteon
Haversian canal
Compact bone
Spongy bone
Periosteum
Endosteum
Ligament
Tendon
Joint
Synovial joint
Ball and socket joint
Hinge joint
Pivot joint
Saddle joint
Gliding joint
Fibrous joint
Cartilaginous joint
Skeletal muscle
Smooth muscle
Cardiac muscle
Sarcomere
Actin
Myosin
Tropomyosin
Troponin
Sliding filament theory
Motor unit
Neuromuscular junction
Acetylcholine
Muscle contraction
Muscle relaxation
Muscle fatigue
Oxygen debt
Lactic acid
Creatine phosphate
Glycogen
Fast-twitch fiber
Slow-twitch fiber
Intermediate fiber
Skin
Epidermis
Dermis
Hypodermis
Keratin
Melanin
Melanocyte
Keratinocyte
Langerhans cell
Merkel cell
Sebaceous gland
Sweat gland
Hair follicle
Hair
Nail
Wound healing
Scar tissue
Burn
Skin graft
Sensory receptor
Mechanoreceptor
Thermoreceptor
Nociceptor
Photoreceptor
Chemoreceptor
Proprioception
Vestibular system
Inner ear
Middle ear
Outer ear
Cochlea
Semicircular canal
Eustachian tube
Eardrum
Ossicles
Hearing
Balance
Eye
Retina
Rod cell
Cone cell
Fovea
Optic nerve
Blind spot
Lens
Cornea
Iris
Pupil
Ciliary muscle
Aqueous humor
Vitreous humor
Sclera
Choroid
Accommodation
Visual acuity
Color vision
Trichromatic theory
Opponent process theory
Depth perception
Binocular vision
Monocular cue
Visual illusion
Perception
Sensation
Psychophysics
Weber's law
Fechner's law
Signal detection theory
Absolute threshold
Difference threshold
Just noticeable difference
Sensory adaptation
Habituation
Sensitization
Attention
Selective attention
Divided attention
Inattentional blindness
Change blindness
Consciousness
Altered state of consciousness
Sleep
Circadian rhythm
Sleep cycle
REM sleep
Non-REM sleep
Slow-wave sleep
Sleep deprivation
Insomnia
Sleep apnea
Narcolepsy
Dreaming
Lucid dreaming
Nightmare
Sleepwalking
Hypnosis
Meditation
Mindfulness
Memory
Sensory memory
Short-term memory
Working memory
Long-term memory
Explicit memory
Implicit memory
Episodic memory
Semantic memory
Procedural memory
Declarative memory
Encoding
Storage
Retrieval
Forgetting
Amnesia
Anterograde amnesia
Retrograde amnesia
Memory consolidation
Hippocampus
Amygdala
Prefrontal cortex
Basal ganglia
Cerebellum
Thalamus
Hypothalamus
Limbic system
Corpus callosum
Cerebral cortex
Frontal lobe
Parietal lobe
Temporal lobe
Occipital lobe
Broca's area
Wernicke's area
Motor cortex
Somatosensory cortex
Visual cortex
Auditory cortex
Association area
Mirror neuron
Neuroplasticity
Neurogenesis
Synaptic pruning
Long-term potentiation
Long-term depression
Hebbian theory
Connectionism
Parallel distributed processing
Cognitive science
Cognitive psychology
Behaviorism
Classical conditioning
Operant conditioning
Reinforcement
Punishment
Extinction
Spontaneous recovery
Generalization
Discrimination
Shaping
Observational learning
Social learning theory
Modeling
Self-efficacy
Locus of control
Attribution theory
Cognitive dissonance
Social cognition
Schema
Script
Stereotype
Prejudice
Discrimination
Ingroup
Outgroup
Social identity theory
Self-concept
Self-esteem
Self-serving bias
Fundamental attribution error
Actor-observer bias
Halo effect
Confirmation bias
Availability heuristic
Representativeness heuristic
Anchoring bias
Framing effect
Loss aversion
Sunk cost fallacy
Gambler's fallacy
Hot hand fallacy
Dunning-Kruger effect
Bystander effect
Diffusion of responsibility
Social facilitation
Social loafing
Deindividuation
Groupthink
Conformity
Asch conformity experiments
Milgram experiment
Stanford prison experiment
Obedience
Authority
Leadership
Transactional leadership
Transformational leadership
Servant leadership
Emotional intelligence
Empathy
Sympathy
Compassion
Altruism
Prosocial behavior
Aggression
Frustration-aggression hypothesis
Social exchange theory
Equity theory
Reciprocity
Norm
Role
Status
Group dynamics
Small group
Large group
Crowd
Mob
Social movement
Collective behavior
Rumor
Gossip
Propaganda
Persuasion
Elaboration likelihood model
Central route
Peripheral route
Source credibility
Message framing
Two-step flow
Agenda setting
Gatekeeping
Media effects
Cultivation theory
Uses and gratifications
Spiral of silence
Third-person effect
Hostile media effect
Selective exposure
Selective perception
Selective retention
Echo chamber
Filter bubble
Fake news
Misinformation
Disinformation
Deepfake
Algorithm
Recommendation system
Collaborative filtering
Content-based filtering
Hybrid recommender system
Cold start problem
Sparsity
Scalability
Evaluation metrics
Precision
Recall
F1 score
ROC curve
AUC
Confusion matrix
Overfitting
Underfitting
Bias-variance tradeoff
Regularization
Cross-validation
Training set
Validation set
Test set
Supervised learning
Unsupervised learning
Reinforcement learning
Clustering
K-means
Hierarchical clustering
Dimensionality reduction
Principal component analysis
PCA
t-SNE
Autoencoder
Generative adversarial network
GAN
Recurrent neural network
RNN
Long short-term memory
LSTM
Convolutional neural network
CNN
Transformer
Attention mechanism
Self-attention
Multi-head attention
Positional encoding
Encoder
Decoder
Sequence-to-sequence
Seq2seq
Beam search
Greedy decoding
Temperature
Top-k sampling
Nucleus sampling
Prompt engineering
Few-shot learning
Zero-shot learning
One-shot learning
In-context learning
Fine-tuning
Pre-training
Transfer learning
Multimodal
Vision-language model
Text-to-image
Image-to-text
Speech recognition
Text-to-speech
Natural language processing
NLP
Tokenization
Stemming
Lemmatization
Part-of-speech tagging
Named entity recognition
Sentiment analysis
Topic modeling
Latent Dirichlet allocation
LDA
Word embedding
Word2vec
GloVe
FastText
Contextual embedding
ELMo
BERT
GPT
Large language model
LLM
Hallucination
Alignment
Reinforcement learning from human feedback
RLHF
Constitutional AI
Red teaming
Jailbreak
Prompt injection
Adversarial example
Robustness
Explainability
Interpretability
Fairness
Accountability
Transparency
Ethics
AI safety
Existential risk
Singularity
Technological unemployment
Automation
Robotics
Autonomous vehicle
Self-driving car
Drone
Swarm intelligence
Collective intelligence
Crowdsourcing
Wisdom of crowds
Prediction market
Forecasting
Superforecasting
Calibration
Brier score
Scoring rule
Proper scoring rule
Bayesian inference
Bayes' theorem
Prior probability
Posterior probability
Likelihood
Evidence
Bayesian network
Markov chain
Hidden Markov model
Monte Carlo method
Markov chain Monte Carlo
MCMC
Gibbs sampling
Metropolis-Hastings algorithm
Variational inference
Expectation-maximization
EM algorithm
Maximum likelihood estimation
MLE
Maximum a posteriori
MAP
Frequentist
Bayesian
Probability
Statistics
Descriptive statistics
Inferential statistics
Mean
Median
Mode
Standard deviation
Variance
Normal distribution
Central limit theorem
Law of large numbers
Hypothesis testing
Null hypothesis
Alternative hypothesis
p-value
Significance level
Type I error
Type II error
Power
Effect size
Confidence interval
Regression
Linear regression
Logistic regression
Multiple regression
Multicollinearity
Heteroscedasticity
Residual
Outlier
Leverage
Cook's distance
Analysis of variance
ANOVA
Factorial design
Repeated measures
Between-subjects
Within-subjects
Mixed design
Post hoc test
Tukey's HSD
Bonferroni correction
False discovery rate
Benjamini-Hochberg
Meta-analysis
Forest plot
Publication bias
Funnel plot
Replication crisis
Open science
Preregistration
Registered report
Data sharing
Reproducibility
Version control
Git
GitHub
Jupyter notebook
R
Python
NumPy
SciPy
pandas
scikit-learn
TensorFlow
PyTorch
Keras
Matplotlib
Seaborn
ggplot2
Tidyverse
Shiny
Docker
Container
Virtual machine
Cloud computing
Amazon Web Services
AWS
Google Cloud Platform
GCP
Microsoft Azure
Kubernetes
Serverless
Function as a service
Infrastructure as code
Terraform
Ansible
Continuous integration
Continuous deployment
CI/CD
Agile
Scrum
Kanban
Sprint
Backlog
User story
Pair programming
Code review
Technical debt
Refactoring
Design pattern
Object-oriented programming
Functional programming
Procedural programming
Class
Object
Inheritance
Polymorphism
Encapsulation
Abstraction
Interface
Dependency injection
Model-view-controller
MVC
Model-view-viewmodel
MVVM
Representational state transfer
REST
API
Application programming interface
JSON
XML
YAML
Protocol buffer
gRPC
HTTP
HTTPS
TCP/IP
UDP
DNS
IP address
Subnet
Router
Firewall
Load balancer
Reverse proxy
Content delivery network
CDN
Caching
Memcached
Redis
Database
Relational database
SQL
NoSQL
Document database
Key-value store
Graph database
Time series database
Data warehouse
Data lake
ETL
Extract, transform, load
Data pipeline
Apache Kafka
Apache Spark
Hadoop
MapReduce
Distributed computing
Consensus algorithm
Paxos
Raft
Byzantine fault tolerance
Blockchain
Cryptocurrency
Bitcoin
Ethereum
Smart contract
Decentralized finance
DeFi
Non-fungible token
NFT
Web3
Metaverse
Augmented reality
Virtual reality
Mixed reality
Extended reality
XR
Haptic feedback
Brain-computer interface
Neuralink
Quantum computing
Qubit
Superposition
Entanglement
Quantum supremacy
Quantum error correction
Post-quantum cryptography
Lattice-based cryptography
Homomorphic encryption
Zero-knowledge proof
Secure multi-party computation
Differential privacy
Federated learning
Edge computing
Internet of things
IoT
Smart home
Smart city
Digital twin
Simulation
Agent-based model
System dynamics
Complex system
Emergence
Self-organization
Chaos theory
Butterfly effect
Fractal
Power law
Scale-free network
Small-world network
Network science
Graph theory
Vertex
Edge
Adjacency matrix
Degree centrality
Betweenness centrality
Closeness centrality
Eigenvector centrality
PageRank
Community detection
Modularity
Clique
Bipartite graph
Hypergraph
Simplicial complex
Topological data analysis
Persistent homology
Barcode
Mapper algorithm
Manifold learning
Isomap
Locally linear embedding
Diffusion map
Spectral clustering
Graph neural network
Message passing
Node embedding
Link prediction
Knowledge graph
Ontology
Semantic web
Linked data
RDF
SPARQL
OWL
Description logic
Reasoning
Inference
Expert system
Rule-based system
Fuzzy logic
Probabilistic programming
Stan
PyMC
Edward
Pyro
Turing
Julia
Scala
Haskell
Lisp
Prolog
Logic programming
Constraint satisfaction
Satisfiability
SAT solver
Automated theorem proving
Formal verification
Model checking
Temporal logic
Linear temporal logic
Computation tree logic
Petri net
Process algebra
Communicating sequential processes
CSP
Actor model
Concurrency
Parallelism
Race condition
Deadlock
Livelock
Starvation
Mutex
Semaphore
Monitor
Lock-free
Wait-free
Memory model
Sequential consistency
Linearizability
Eventual consistency
CAP theorem
Consistency
Availability
Partition tolerance
Two-phase commit
Three-phase commit
Saga pattern
Event sourcing
Command query responsibility segregation
CQRS
Domain-driven design
Bounded context
Aggregate
Value object
Entity
Repository
Factory
Service
Anti-corruption layer
Strangler fig pattern
Microservices
Monolith
Modular monolith
Service mesh
Sidecar
Istio
Envoy
Observability
Logging
Metrics
Tracing
OpenTelemetry
Prometheus
Grafana
Alerting
Incident response
Postmortem
Blameless culture
Site reliability engineering
SRE
Error budget
Service level objective
SLO
Service level indicator
SLI
Service level agreement
SLA
Chaos engineering
Fault injection
Load testing
Stress testing
Soak testing
Benchmarking
Profiling
Flame graph
Memory leak
Garbage collection
Reference counting
Mark and sweep
Generational garbage collection
Just-in-time compilation
JIT
Ahead-of-time compilation
AOT
Interpreter
Compiler
Bytecode
Virtual machine
JVM
CLR
WebAssembly
Transpiler
Source-to-source compiler
Abstract syntax tree
AST
Lexer
Parser
Semantic analysis
Intermediate representation
Optimization
Dead code elimination
Constant folding
Loop unrolling
Inlining
Tail call optimization
Register allocation
Instruction scheduling
Linker
Loader
Dynamic linking
Static linking
Shared library
Operating system
Kernel
Monolithic kernel
Microkernel
Hypervisor
Type 1 hypervisor
Type 2 hypervisor
Paravirtualization
Full virtualization
Containerization
Namespace
Cgroup
Union file system
Overlay network
Software-defined networking
SDN
Network function virtualization
NFV
Zero trust
Multi-factor authentication
Single sign-on
OAuth
OpenID Connect
SAML
Public key infrastructure
PKI
Certificate authority
Transport Layer Security
TLS
Secure Sockets Layer
SSL
Hash function
SHA-256
MD5
Digital signature
Asymmetric encryption
Symmetric encryption
Advanced Encryption Standard
AES
RSA
Elliptic curve cryptography
Diffie-Hellman key exchange
Perfect forward secrecy
Penetration testing
Vulnerability scanning
Common Vulnerabilities and Exposures
CVE
Common Weakness Enumeration
CWE
OWASP Top Ten
Cross-site scripting
XSS
Cross-site request forgery
CSRF
SQL injection
Buffer overflow
Stack overflow
Heap overflow
Return-oriented programming
ROP
Address space layout randomization
ASLR
Data execution prevention
DEP
Control flow integrity
Sandboxing
Capability-based security
Principle of least privilege
Defense in depth
Security by design
Threat modeling
Risk assessment
Incident response plan
Disaster recovery
Business continuity
Backup
Recovery point objective
RPO
Recovery time objective
RTO
Failover
Redundancy
High availability
Fault tolerance
Graceful degradation
Circuit breaker
Bulkhead
Retry
Exponential backoff
Jitter
Rate limiting
Throttling
Quota
Idempotency
Eventual consistency
Conflict-free replicated data type
CRDT
Operational transformation
Collaborative editing
Real-time communication
WebRTC
Peer-to-peer
Distributed hash table
Gossip protocol
Epidemic protocol
Merkle tree
Bloom filter
Skip list
B-tree
Hash table
Trie
Suffix tree
Inverted index
Search engine
Web crawler
Robots.txt
Sitemap
Search engine optimization
SEO
Pay-per-click
PPC
Click-through rate
CTR
Conversion rate
A/B testing
Multivariate testing
Funnel analysis
Cohort analysis
Retention
Churn
Customer lifetime value
CLV
Net promoter score
NPS
Customer satisfaction
CSAT
Customer effort score
CES
Voice of the customer
VoC
Customer journey map
Persona
Empathy map
Design thinking
Human-centered design
Usability
User experience
UX
User interface
UI
Information architecture
Wireframe
Prototype
Mockup
Interaction design
Visual design
Typography
Color theory
Gestalt principles
Accessibility
Inclusive design
Universal design
Assistive technology
Screen reader
Alt text
Semantic HTML
ARIA
Keyboard navigation
Focus management
Responsive design
Mobile first
Progressive enhancement
Graceful degradation
Cross-browser compatibility
Polyfill
Shim
Feature detection
User agent
Browser
Rendering engine
Blink
WebKit
Gecko
Document Object Model
DOM
Cascading Style Sheets
CSS
Flexbox
Grid
Media query
Viewport
Pixel
Vector graphics
Raster graphics
Scalable Vector Graphics
SVG
Canvas
WebGL
Shader
Vertex shader
Fragment shader
Rasterization
Ray tracing
Global illumination
Physically based rendering
PBR
Texture mapping
Normal mapping
Bump mapping
Displacement mapping
Shadow mapping
Ambient occlusion
Level of detail
LOD
Frustum culling
Occlusion culling
Scene graph
Game engine
Unity
Unreal Engine
Godot
Physics engine
Collision detection
Rigid body
Soft body
Particle system
Animation
Skeletal animation
Keyframe
Tween
Easing
Motion capture
Procedural generation
Noise function
Perlin noise
Simplex noise
Cellular automaton
Game loop
Entity component system
ECS
Finite state machine
Behavior tree
Pathfinding
A* algorithm
Dijkstra's algorithm
Navigation mesh
Steering behavior
Flocking
Boids
Artificial life
Genetic algorithm
Evolutionary computation
Neuroevolution
NEAT
Reinforcement learning
Q-learning
Deep Q-network
DQN
Policy gradient
Actor-critic
Proximal policy optimization
PPO
Trust region policy optimization
TRPO
Monte Carlo tree search
MCTS
AlphaGo
AlphaZero
MuZero
Self-play
Curriculum learning
Imitation learning
Behavioral cloning
Inverse reinforcement learning
Multi-agent reinforcement learning
Cooperative game theory
Nash equilibrium
Prisoner's dilemma
Tragedy of the commons
Public goods game
Ultimatum game
Dictator game
Trust game
Evolutionary game theory
Replicator dynamics
Evolutionarily stable strategy
Hawk-dove game
Stag hunt
Coordination game
Battle of the sexes
Chicken game
Auction theory
First-price auction
Second-price auction
Vickrey auction
English auction
Dutch auction
Revenue equivalence
Mechanism design
Social choice theory
Arrow's impossibility theorem
Condorcet method
Borda count
Instant-runoff voting
Approval voting
Quadratic voting
Liquid democracy
Delegated proxy
Voting system
Gerrymandering
Redistricting
Electoral college
Proportional representation
Single-transferable vote
Mixed-member proportional
Party-list system
First-past-the-post
Two-round system
Runoff election
Primary election
Caucus
Convention
Platform
Campaign finance
Political action committee
PAC
Super PAC
Lobbying
Regulatory capture
Rent-seeking
Public choice theory
Median voter theorem
Downs model
Spatial model of voting
Issue voting
Party identification
Retrospective voting
Prospective voting
Economic voting
Pocketbook voting
Sociotropic voting
Egotropic voting
Valence issue
Position issue
Salience theory
Rational ignorance
Rational abstention
Paradox of voting
Turnout
Voter suppression
Voter ID law
Absentee ballot
Mail-in voting
Early voting
Election day
Exit poll
Opinion poll
Sampling bias
Margin of error
Confidence level
Random sampling
Stratified sampling
Cluster sampling
Systematic sampling
Convenience sampling
Quota sampling
Snowball sampling
Survey design
Question wording
Leading question
Social desirability bias
Nonresponse bias
Interviewer effect
Mode effect
Telephone survey
Online survey
Face-to-face interview
Panel study
Cross-sectional study
Longitudinal study
Time series analysis
Seasonal adjustment
Trend analysis
Forecasting model
Econometrics
Instrumental variable
Difference-in-differences
Regression discontinuity
Natural experiment
Quasi-experiment
Randomized controlled trial
RCT
Intention-to-treat
Per-protocol
Attrition
Dropout
Missing data
Imputation
Multiple imputation
Listwise deletion
Pairwise deletion
Sensitivity analysis
Robustness check
Specification curve
Multiverse analysis
Garden of forking paths
Researcher degrees of freedom
p-hacking
HARKing
File drawer problem
Publication bias
Citation bias
Matthew effect
Impact factor
h-index
Altmetrics
Open access
Gold open access
Green open access
Preprint
arXiv
bioRxiv
Peer review
Double-blind review
Single-blind review
Open peer review
Post-publication review
Retraction
Retraction Watch
Predatory publishing
Paper mill
Authorship
Author order
Corresponding author
Contributorship
CRediT
Conflict of interest
Publication ethics
Committee on Publication Ethics
COPE
Declaration of Helsinki
Belmont Report
Institutional review board
IRB
Informed consent
Assent
Vulnerable population
Research ethics
Animal welfare
3Rs
Replacement
Reduction
Refinement
Dual-use research
Biosecurity
Biosafety
Biosafety level
Containment
Quarantine
Outbreak
Epidemic
Pandemic
Endemic
Herd immunity
Basic reproduction number
R0
Effective reproduction number
Rt
Incubation period
Serial interval
Case fatality rate
Infection fatality rate
Attack rate
Epidemiology
Surveillance
Contact tracing
Non-pharmaceutical intervention
Social distancing
Mask mandate
Lockdown
Vaccination campaign
Vaccine hesitancy
Vaccine efficacy
Vaccine effectiveness
Herd immunity threshold
Compartmental model
SIR model
SEIR model
Agent-based epidemiological model
Network epidemiology
Superspreading event
Zoonosis
Spillover
Reservoir
Vector
Vector-borne disease
Malaria
Dengue fever
Zika virus
Yellow fever
West Nile virus
Lyme disease
Tick-borne encephalitis
Rabies
Influenza
Avian influenza
Swine influenza
Coronavirus
SARS
MERS
COVID-19
Ebola virus disease
Marburg virus disease
Hemorrhagic fever
Tuberculosis
Multidrug-resistant tuberculosis
Extensively drug-resistant tuberculosis
Antimicrobial resistance
Antibiotic stewardship
Hospital-acquired infection
Nosocomial infection
Sepsis
Septic shock
Meningitis
Encephalitis
Pneumonia
Bronchitis
Tonsillitis
Pharyngitis
Laryngitis
Sinusitis
Otitis media
Conjunctivitis
Dermatitis
Eczema
Psoriasis
Acne
Rosacea
Vitiligo
Albinism
Freckle
Mole
Melanoma
Basal cell carcinoma
Squamous cell carcinoma
Actinic keratosis
Sunburn
Ultraviolet radiation
Ozone layer
Greenhouse effect
Global warming
Climate change
Carbon dioxide
Methane
Nitrous oxide
Fluorinated gases
Carbon footprint
Carbon sequestration
Carbon capture and storage
Renewable energy
Solar energy
Photovoltaic
Concentrated solar power
Wind energy
Wind turbine
Hydroelectric power
Geothermal energy
Biomass
Biofuel
Ethanol
Biodiesel
Hydrogen fuel
Fuel cell
Nuclear energy
Nuclear fission
Nuclear fusion
Tokamak
Stellarator
Inertial confinement fusion
Plasma physics
Magnetic confinement
Energy storage
Battery
Lithium-ion battery
Flow battery
Pumped-storage hydroelectricity
Compressed air energy storage
Flywheel energy storage
Supercapacitor
Smart grid
Microgrid
Demand response
Peak shaving
Load balancing
Energy efficiency
Insulation
Passive house
Net-zero building
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LEED
Building information modeling
BIM
Urban planning
Zoning
Land use
Transportation
Public transit
Bus rapid transit
Light rail
Subway
Commuter rail
High-speed rail
Maglev
Hyperloop
Electric vehicle
Plug-in hybrid electric vehicle
PHEV
Hybrid electric vehicle
HEV
Regenerative braking
Charging station
Range anxiety
Autonomous vehicle
Connected vehicle
Vehicle-to-grid
V2G
Vehicle-to-everything
V2X
Dedicated short-range communications
DSRC
Cellular V2X
C-V2X
Intelligent transportation system
ITS
Traffic light
Traffic sign
Road marking
Roundabout
Interchange
Overpass
Underpass
Bridge
Tunnel
Toll road
Congestion pricing
Parking
Parking meter
Parking garage
Valet parking
Ride-sharing
Carpooling
Bike-sharing
Scooter-sharing
Micromobility
Last-mile problem
First-mile problem
Multimodal transportation
Intermodal transportation
Freight transportation
Logistics
Supply chain
Just-in-time manufacturing
Lean manufacturing
Six Sigma
Total quality management
Kaizen
Poka-yoke
Value stream mapping
Bottleneck
Throughput
Cycle time
Takt time
Work in progress
WIP
Inventory
Economic order quantity
Safety stock
Reorder point
Demand forecasting
Bullwhip effect
Vendor-managed inventory
Drop shipping
Warehouse
Distribution center
Cross-docking
Last-mile delivery
Reverse logistics
Circular economy
Cradle to cradle
Life cycle assessment
Environmental impact assessment
Sustainability
Triple bottom line
Corporate social responsibility
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ESG
Greenwashing
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Socially responsible investing
Divestment
Shareholder activism
Proxy voting
Corporate governance
Board of directors
Fiduciary duty
Agency theory
Principal-agent problem
Executive compensation
Stock option
Restricted stock unit
Dividend
Share buyback
Initial public offering
IPO
Secondary market
Stock exchange
New York Stock Exchange
NYSE
Nasdaq
London Stock Exchange
Tokyo Stock Exchange
Shanghai Stock Exchange
Hong Kong Stock Exchange
Euronext
Deutsche Börse
Bombay Stock Exchange
National Stock Exchange of India
Market capitalization
Price-to-earnings ratio
Price-to-book ratio
Dividend yield
Earnings per share
Return on equity
Return on assets
Return on investment
Gross margin
Operating margin
Net profit margin
Revenue
Income statement
Balance sheet
Cash flow statement
Statement of retained earnings
Statement of comprehensive income
Generally Accepted Accounting Principles
GAAP
International Financial Reporting Standards
IFRS
Sarbanes-Oxley Act
Dodd-Frank Act
Glass-Steagall Act
Volcker Rule
Basel III
Capital requirement
Leverage ratio
Liquidity coverage ratio
Net stable funding ratio
Stress test
Systemic risk
Too big to fail
Moral hazard
Bailout
Quantitative easing
Monetary policy
Federal Reserve
European Central Bank
Bank of Japan
People's Bank of China
Reserve Bank of India
Bank of England
Central bank
Interest rate
Federal funds rate
Discount rate
Open market operations
Reserve requirement
Money supply
M1
M2
M3
Inflation
Deflation
Hyperinflation
Stagflation
Consumer price index
Producer price index
Gross domestic product
GDP
Gross national product
GNP
Purchasing power parity
Exchange rate
Floating exchange rate
Fixed exchange rate
Currency peg
Foreign exchange market
Forex
Carry trade
Balance of payments
Current account
Capital account
Financial account
Trade deficit
Trade surplus
Tariff
Quota
Embargo
Sanction
Free trade
Free trade agreement
North American Free Trade Agreement
NAFTA
United States-Mexico-Canada Agreement
USMCA
European Union
Eurozone
Maastricht Treaty
Lisbon Treaty
Brexit
Association of Southeast Asian Nations
ASEAN
Regional Comprehensive Economic Partnership
RCEP
Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CPTPP
World Trade Organization
WTO
International Monetary Fund
IMF
World Bank
International Development Association
IDA
International Finance Corporation
IFC
Multilateral Investment Guarantee Agency
MIGA
International Centre for Settlement of Investment Disputes
ICSID
Bretton Woods system
Gold standard
Special drawing rights
SDR
Foreign direct investment
FDI
Portfolio investment
Hot money
Capital flight
Sovereign wealth fund
Sovereign debt
Debt crisis
Default
Credit rating
Credit rating agency
Moody's
Standard & Poor's
Fitch Ratings
Bond
Treasury bond
Municipal bond
Corporate bond
Junk bond
Investment grade
Yield curve
Inverted yield curve
Term structure of interest rates
Liquidity preference
Loanable funds
Aggregate demand
Aggregate supply
Keynesian economics
Monetarism
Supply-side economics
Austrian economics
Chicago school of economics
New Keynesian economics
Real business cycle theory
Rational expectations
Efficient market hypothesis
Random walk hypothesis
Behavioral economics
Prospect theory
Nudge theory
Libertarian paternalism
Choice architecture
Default effect
Status quo bias
Endowment effect
Mental accounting
Hedonic treadmill
Adaptation-level theory
Relative deprivation
Social comparison theory
Upward comparison
Downward comparison
Envy
Schadenfreude
Gratitude
Forgiveness
Hope
Optimism
Pessimism
Learned helplessness
Depression
Major depressive disorder
Persistent depressive disorder
Bipolar disorder
Mania
Hypomania
Cyclothymia
Anxiety disorder
Generalized anxiety disorder
Panic disorder
Agoraphobia
Social anxiety disorder
Specific phobia
Obsessive-compulsive disorder
OCD
Post-traumatic stress disorder
PTSD
Acute stress disorder
Adjustment disorder
Dissociative disorder
Dissociative identity disorder
Dissociative amnesia
Depersonalization-derealization disorder
Somatic symptom disorder
Illness anxiety disorder
Conversion disorder
Factitious disorder
Munchausen syndrome
Malingering
Eating disorder
Anorexia nervosa
Bulimia nervosa
Binge eating disorder
Avo

and math proficiency.

Nor does having taken specific courses do much to improve math and science scores. According to the National Center for Education Statistics, fourth-graders in classes with a heavy instructional emphasis in numbers and operations, measurement, and geometry post math-achievement scores *almost identical* to those of fourth-graders in classes in which these subjects receive little or no attention.

The same is true of eighth-graders with respect to geometry, data analysis, and probability. And in high school science exams, 11th-graders who have taken biology, chemistry, or physics score an average of no more than 10% to 15% higher on tests in these specific subjects than do students who haven't taken these courses.

A CLOSER LOOK AT SCIENCE AND MATH DEFICIENCIES

Figures like these suggest there's a good deal more to acquiring science and math skills than sitting through a class on the subject — and thus that the declines in science and math achievement may be more complex than they seem to be. In fact, they *are* more complex, in a number of ways:

First, proficiencies in virtually all academic subjects — not just science and math — have fallen. According to the latest National Assessment of Educational Progress (NAEP), young people's reading and writing capabilities have declined so much in the past two decades that a mere 5% of today's high school seniors can read and understand technical materials, literary essays, and college-level textbooks, and only a small minority can write a persuasive paper sufficient "to influence others or move them to action." Indeed, verbal scores on the Scholastic Aptitude Test have fallen more than twice as fast as math scores have during the last quarter-century, and they reached an all-time low earlier this year (see chart). Performance on history and literature exams has slipped as well.

> *"The worst thing we can do to our kids is allow them to be scared of mathematics. We have to show them it can be wonderful fun . . . Mathematics is the poetry of science."*
>
> **Vice Admiral Richard H. Truly (Ret.)**
> Director, NASA

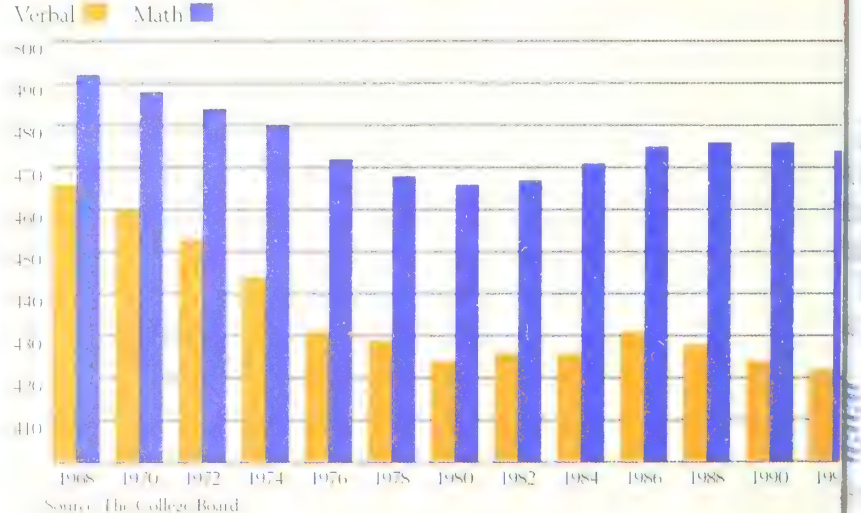
Second, the more advanced the work is, the greater science and math deficiencies become. Science test scores for nine-year-olds remained relatively stable between 1970 and 1986, but fell by 16 points for 17-year-olds; in math, although the differences were smaller, scores rose for nine-year-olds, but dropped for the older students. International studies, the MIT Commission on Industrial Productivity points out, also show American youths "falling behind children in other societies in mathematics, science, and language . . . at early ages and *falling further behind* as they progress through the school years."

The main reason for these falloffs in achievement as children age is that many U.S. teenagers have trouble performing tasks that require higher-order thinking skills. In the NAEP evaluations, for example, while more nine-year-olds have mastered rudimentary science, math, and reading skills in recent decades, the proportions of 17-year-olds performing at top skill levels in these areas have uniformly declined — in some cases by as much as a third.

Third, science and math performance is lower among minority youths than among the rest of the population, particularly at the highest skill levels. Black youths' average NAEP test scores are only slightly below those of white youths (about 85% of the white average in science and about 90% in math); however, black students are barely one-tenth as likely to be in the top skill category in science and reading, and, among 17-year-olds, are less than one-twentieth

A Drop in S.A.T. Scores

Average Scholastic Aptitude Test Scores for College-bound Seniors, 1968-1991



Source: The College Board

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able to solve math problems that involve algebra or multiple steps.

Finally, these ability differences emerge very early in young people's lives. Studies conducted for the U.S. Department of Education, the Educational Testing Service, the University of Kentucky, and Maryland's Department of Educational Assessment all have found that disparities in student performance in science, math, and reading arise as early as the fourth grade — sometimes as early as grade one — and persist for the duration of the students' schooling. As the Maryland study soberly puts it, once young people slip below the expected math performance level for their grade, they are "unlikely ever to reach that grade-level standard again."

SCIENCE AND MATH IN THE CLASSROOM

Analyzing America's failings in science and math has become a minor growth industry in recent years. But none of the dozens of studies of this issue calls attention to one critical fact: Any full diagnosis of the decline in science and math performance must also explain the four conditions just cited.

It's hard to overstate the importance of this principle. If we can't account for all the main symptoms of a disease, we probably won't cure it. It does little good, for instance, to conclude that poor teaching is the primary cause of math failure when achievement levels have diminished in all areas of academic study, not just math. Nor should we be content with rekindling interest in science if increased course-taking in itself does not translate into significantly higher achievement-test scores.

Still, as we shall see, there's plenty of room for improvement within the confines of science and math classrooms, and so that is where we will begin.

Stamping Out Curiosity

"Scientists thrive on curiosity — and so do children," asserts James Rutherford, chief education officer of the American Association for the Advancement of Science. "Children enter school alive with questions about everything in sight." Yet these same students, within only a few years, have adopted a much different view of science and math — that it's boring, irrelevant, tedious, useless. What happens to them?

The problem, say Rutherford and his collaborator Andrew Ahlgren in their book *Science for All Americans,* is that the contemporary science and mathematics curricula are "overstuffed and undernourished." The courses attempt to cover too much material, but in too little detail either to hold students' interest or to permit real learning. Instructors are thus forced to "teach everything," and all too frequently teach nothing very well.

Biology education, the most popular high school science subject, is a case in point. Most students find biology "boring 'because you have to memorize too much stuff,' " reports Brown University biology professor Grace Taylor. Faced with having to finish a 700-page text in 180 school days, the teacher resorts to lecturing. "Depth," she says, "is subjugated [to] breadth, and coverage is confused with real study." Meanwhile, "large conceptual issues, such as relationships among living things, tend to be ignored."

"Stultifying Drudgery"

Unlike science, the mathematics curriculum typically contains a more manageable number of topics, but proceeds to drill them into students with such deadening persistence that math becomes as exciting as sorting socks.

A recent photograph in *The New York Times,* accompanying an article appealing for more school funding, inadvertently indicts the instruction it meant to defend. The photo, of a North Bronx classroom, displays a blackboard on which elementary-school students have painstakingly worked a variety of problems: all multiplications of four-digit numbers. Not only are four of the five answers on the blackboard incorrect — a sad commentary on the state of elementary math education in itself — but these are problems the students could have solved in an instant (and more accurately) with a $5 calculator.

Why are schoolchildren put through this trial? The usual response is: to teach them the principles of arithmetic. To which former Harvard University economist Robert Dorfma

Most children bring to school a natural curiosity about the world around them.

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FIGHTING FOR OUR FUTURE

s, "Hogwash!" Tedious exercises, rites in *The New York Times*, "can't principles. What they teach is arithmetic, and by extension math- ics, . . . is stultifying drudgery. The escapes are to close your mind, nooky, or drop out."

ne review of three best-selling ematics-textbook series reveals just tedious and repetitive mathemat- struction has become. The study lates that, in sixth through eighth s, barely one-third of the informa- covered each year is new material. ulatively, in their seven years of between first and eighth grades, nts learn the equivalent of no than three years of mathematics ad bargain in anyone's book.

s and Procedures

s destructive as narcoleptic curric- the myopic character of what's taught. In general, as Grace r indicates, science teaches facts d of concepts — "bits and pieces formation," in Rutherford and ren's words. Some critics have so far as to describe the majority gh school science texts as "glos- masquerading as textbooks." ith such texts as guides, analysis xperimentation — the heart of his- l science — are squeezed out of a many classrooms. NAEP data that only about a third of sev- graders and half of 11th-graders lled upon to "hypothesize or pret data in their science class at on a weekly basis," while 60% of th-graders and 41% of 11th- rs are *never* called upon to write e results of science experiments. for math, says St. Olaf College ematics professor Lynn Arthur , schools teach the subject primarily igid set of procedures, "not as a al approach to understanding pat- and solving problems" — as the photograph suggests. In fact, the asis math courses place on devel- broader reasoning and analytic

> *"We're the only industrialized nation in the world that teaches arithmetic for eight years."*
>
> **Iris Carl**
> President, National Council of Teachers of Mathematics

skills actually *declines* between the fourth and eighth grades. Students thus become adept at manipulating numbers and symbols, but often don't have the faintest idea what they're doing.

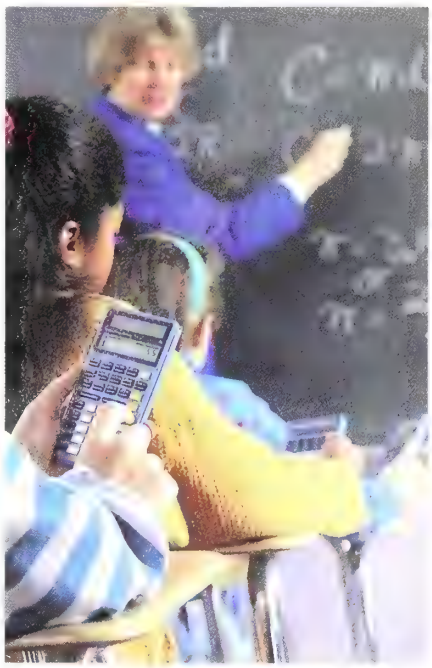
Bill Honig, the California Superintendent of Public Instruction, illustrates the pitfalls of this type of instruction. On a recent California achievement test, sixth-graders were asked to compute the height of a horse. Among the students with incorrect answers, one-third said the horse was 16 inches tall, another third, 64 feet. The children calculated, but didn't bother — or weren't able — to think about what the numbers meant.

Assessment and Performance

Achievement tests tend to reinforce this pedagogy of facts and procedures, completing a cycle in which students are taught sterile and disconnected information by teachers who know that this is precisely what the standardized achievement tests are going to measure. While such "teaching to the test" may keep student achievement-test scores from falling more than they otherwise might, it does little to encourage the development of higher-order thinking skills.

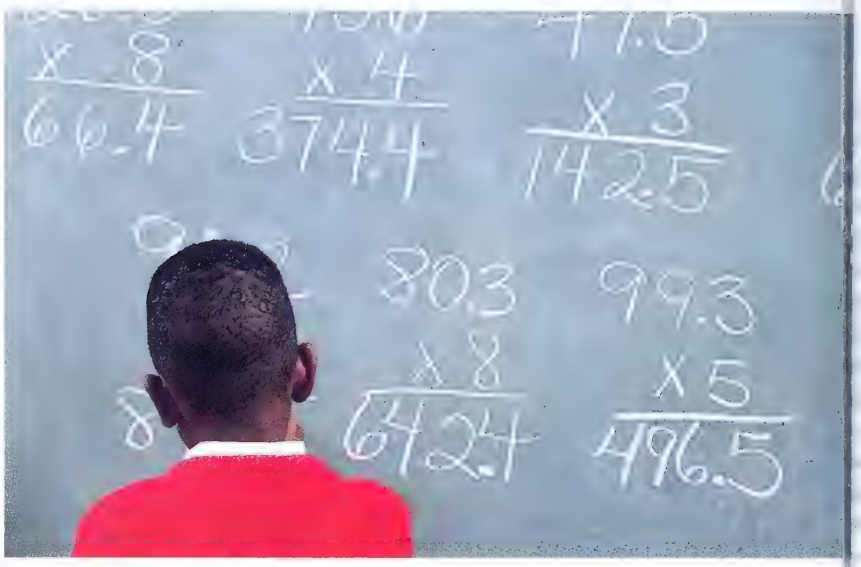
A study prepared for the April 1991 National Summit on Mathematics Assessment shows why. Researchers found that an average of 74% of the questions on six of the most popular eighth-grade math-achievement tests measured basic arithmetic skills — the kind of skills that, in the age of calculators, might most charitably be termed "keypad literacy." A mere 26% of the questions assessed skills and concepts in algebra, probability, statistics, geometry and measurement — mathematical knowledge needed for the majority of the coming decade's jobs.

It doesn't have to be that way. To demonstrate, the study contrasted two questions, one from a U.S. math test and one from a Netherlands test. The U.S. test asked simply, "What percent of 500 is 30?" The Netherlands test gave these facts: "In 1980, the defense budget of a certain country was $30 million out of a total budget of $500 million. In 1981, the defense budget of that same country was $35 million out of a total budget of $605 million. The country's inflation rate for that one-year period was 10%." The test then asked students to use these facts to argue that the defense budget had increased or decreased.



GABE PALMER/THE STOCK MARKET

Calculators allow children to spend less time on rote computation.



Endless drills on simple arithmetic deprive children of the practice they need fo mastering higher-order thinking skills.

Pop quiz for test makers: Is it any wonder why Netherlands youth far outpace U.S. teens in math performance and general thinking skills?

THE SCIENTIFIC MIND

The instructional practices just discussed — tedious course work, sprawling, surface-deep textbooks, and fact- and procedure-oriented achievement tests — do little to enhance students' understanding of science and mathematics. Children are quickly turned off, or tune out; others are merely confused, left to wander alone in a dark forest of numbers and equations and incomprehensible words.

As a result of this press of negative factors, many students rush to leave the science and math curriculum at the earliest possible moment. All told, concludes the National Research Council in its 1989 report *Everybody Counts,* "three of every four Americans stop studying mathematics before completing career or job prerequisites." In science, too, enrollment drops by more than a third between the seventh and 11th grades. Even in schools that offer high-quality advanced science and math courses, 80% or more of the students refuse to sign up.

> *"All children can learn science, but only if it's properly taught."*
>
> **Bill Aldridge**
> Executive Director, National Science Teachers Association

Still, as persuasive as these figures are, the indisputable failings of contemporary science and math instruction leave a great deal *un*explained:

- Why U.S. science and math achievement-test scores have fallen in recent decades, when instructional methods at worst have remained unchanged.
- Why achievement levels in almost *all* academic areas have declined — in some cases, more steeply than in science and math.
- Why science and math performance drops off so sharply as the work becomes more demanding, even among students who persist in these subjects.
- Why minority students' average achievement levels are so much lower than those of the rest of the student population, especially at the highest skill levels.
- Why achievement differences arise early in children's lives — well before children are exposed to teaching that could be called boring, unduly repetitive, or confusing — and why these differences persist in the years thereafter.

Not until we can account for each of these phenomena can we truly claim to have explained America's decline in science and math — and, hence, to have laid the foundation for an effective solution.

Scientific Reasoning

In seeking this explanation, it is essential to understand how young people learn science and math. Doing so demands, first, that we recognize the kind of thinking these subjects entail. Everyday discussions sometimes suggest that thinking methods vary according to the field of interest, with one method for science, one for mat and, indeed, one for every discipline.

For instance, Rutherford and Ahlgren describe science as "a proces for producing knowledge." This process, they write in *Science for All Americans,* "depends both on making careful observations of phenomena a on inventing theories for making sen out of those observations."

Later, they depict mathematical re soning in terms that might seem far afield from the real-world observatio of science. "Mathematics is the scienc of patterns and relationships," they explain. "Using mathematics . . . involves at least three phases: (1) rep senting some aspects of things abstra ly, (2) manipulating the abstractions rules of logic to find new relationshi between them, and (3) seeing wheth the new relationships say something useful about the original things."

A moment's reflection, though, reveals that scientific and mathemati thinking may not be so different aft all. In fact, *they are the same thing.* Science may operate on the tangible and mathematics on the abstract, but the practices and procedures of the two enterprises are essentially identic

Habits of Mind

The National Research Council labe this collection of common thought

sses "scientific habits of mind." habits include:
ing questions and formulating heses;
ntifying and collecting informa- elevant to these hypotheses;
g this information to test the heses;
ucing conclusions (patterns, rela- ips) that either confirm or dis- one's suppositions; and
wing out and communicating the cations of these conclusions.
ing these habits of mind to apply ously learned knowledge and skills vel situations is the essence of sci- and mathematical problem-solv- ut it is not just science and math nake use of these talents. *So do all higher-level mental activities.*
r instance, in reading, observes rsity of Pittsburgh cognitive ologist Lauren Resnick, a child a combination of what is writ- what he or she already knows, arious general processes (e.g., g inferences, noting connec- to construct a plausible repre- ion of what the author presum- had in mind." Likewise, writing ves the complex task of mar- ng information for "shaping a nunication that will . . . convince ended audience" rather than simply writing down everything one knows about a topic.

Even skilled technicians repairing equipment "do not just proceed through routine checklists," she says. They "construct 'mental models' of complex systems and use these to reason about possible causes of observed breakdowns and potential repairs."

> *"Studying science and math trains young people to think logically, to be intuitive, and to be better problem solvers."*
>
> **Olafur Olafsson**
> President, Sony Electronic Publishing Company

In fact, the ability to create and act upon these mental models is the *single, unifying characteristic* of higher-order thinking, according to Marc Bornstein, a respected child psychologist at New York University. "Mental representation is pervasive in . . . elementary information processing," he says, noting that it underlies such diverse and critical mental tasks as observation, discrimination, categorization, concept formation, problem solving, and information retrieval.

erative learning and hands-on problem-solving promote nt interest and achievement in science.

The implication, Resnick sums up, "is that complex thinking processes . . . are involved in even the most apparently elementary mental activities." Higher-order thinking, she concludes, "is the hallmark of successful learning at *all* levels" — and in *all* subjects — "not only the more advanced."

SCIENCE AND MATH IN THE VIDEO AGE

A thought experiment: Assume, for whatever reason, that young people's higher-order thinking capabilities had deteriorated over the past two decades. If it is true that these thinking processes underlie not just science and math proficiency, but reading, writing, and other scholastic abilities as well, what would we expect to find?

First, all achievement test scores, not just those in science and math, would have stagnated or fallen. *They have.*

Second, scores for the most intellectually demanding tasks would have declined the most steeply, because of the relatively greater need for higher-order thinking skills in these situations. *They have.*

Third, achievement levels for those young people most educationally at risk — poor and minority children — would be particularly low, because of fewer opportunities to develop these higher-order thinking skills. *They are.*

Fourth, achievement in doubly disadvantaging circumstances — such as poor or minority youths being asked to perform the most intellectually demanding tasks — would have suffered worst of all. *They have.*

Finally, to the extent the capacity for higher-order thinking arises early in a child's life, these academic difficulties would emerge early as well, and often persist throughout childhood. *They do.*

The conclusion thus seems inescapable: Science and math deficiencies are not isolated intellectual problems. Rather, they stem in large part from children's broader failure to develop the underlying higher-order thinking skills that make mastery of

continued

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ELEVISION ORTH WATCHING

he's driven a bulldozer atop a 20-story-high landfill, stumped y Carson on "The ht Show" with her questions about the nment, and lunched wed iguana in a Costa rainforest — all in the of science.

et Stephanie Yu, a r-old junior from rdia High School in York. She's not your l science instructor. en, her classroom's not l either. It's the entire — brought to 8- to 12- ds in the comfort of iving rooms.

Yu is one of a growing gent of young people g to television — long mesis of American edu-

e One TV makes fun.

— as an unexpected the battle against sci- nd math illiteracy. The st year of "You Can't Home Again," a nation- evised special on the ction of the rainforests ced by the New York- Children's Television shop (CTW), Ms. Yu is that kids and science ll go together — even in e of MTV.

ost young people today nvinced that science and math are not relevant to their own lives," explains David Britt, CTW's president. "Anything we can do to make that connection for them is bound to improve their education."

3-2-1 CONTACT

"You Can't Grow Home Again" is part of CTW's award-winning "3-2-1 Contact *Extras*," a series of one-hour specials that take on contemporary science issues of particular concern to elementary-school students. The series follows the successful nine-year run of "3-2-1 Contact," a daily, half-hour science program that took its young viewers "to the four corners of the Earth" in search of science and technology — stimulating their interest in science in the process.

The new series of specials is designed to build on this success by showing kids how science can solve problems in the world around them. In the rainforest program, for example, viewers explored realistic ways in which people and rainforests could continue to coexist.

"The '3-2-1 Contact *Extras*' show kids that science is timely and exciting," says the series' executive producer, Anne Hoffman. "Our goal is to get them to want to find out 'why.' "

Other recent *Extras* have included "Boy Under Ice," the story of a boy who survived being submerged in icy waters for nearly an hour; and, most recently, "Secrets of the Code," which discussed the role of genes in human development.

PHOTOS COURTESY OF CHILDREN'S TELEVISION WORKSHOP

Stephanie Yu, host of "You Can't Grow Home Again."

SQUARE ONE TV

While encouraging kids to explore science through its new series of specials, the Children's Television Workshop also has been promoting interest in math through "Square One TV," a daily half-hour program now in its fourth year.

"Square One TV" covers such challenging math topics as measurement, probability, statistics, data analysis, and problem-solving in a way that is enjoyable and exciting for elementary-school students. Each day's broadcast includes a variety of segments, including game shows, television spoofs, animated characters, music videos, and an ongoing whodunit series.

"People watch 'Square One TV' primarily because they find it very funny," says Jeffrey Nelson, the show's executive producer. "It's also good education," he says. "But kids wouldn't watch it if they didn't enjoy the comedy."

Fun or not, the program *does* help boost math achievement, particularly among the most economically disadvantaged viewers. A recent study of low-income Corpus Christi, Texas, fifth-graders indicated that the problem-solving abilities of those who watched the program regularly over six weeks increased by a third or more, while the skills of non-viewers actually fell.

Square One TV characters.

'A WONDERFUL JOB'

With its creative science and math series, Children's Television Workshop is making it plain — to parents and children alike — that television *can* promote learning if programs provoke curiosity, are closely tied to young people's interests, and are informative as well as fun.

An increasing number of educators agree. "Children's Television Workshop," says Tom King, associate director of the Saturn School of Tomorrow in St. Paul, Minn.: "is doing a wonderful job of introducing young people to the promise and excitement" of math and science. ■

these (and most other academic subjects) possible.

The Video Culture

What could have happened in the past two decades to cause such a reduction in young people's thinking skills?

One of the main culprits, argues child psychologist Marie Winn, is television. Television "is a one-way transaction that requires the taking in of particular sensory material in a particular way, no matter what the material might be," she writes in *The Plug-In Drug*. "There is, indeed, no other experience in a child's life that permits quite so much intake while demanding so little outflow."

Nor is there an activity that's undertaken quite so persistently:

- According to data from the University of Michigan's Institute for Social Research, schoolchildren watch an average of 15.8 hours of television per week. That's more than five times what they devote to homework, and *13 times* what they devote to reading.
- A mere 7% of children spend more than two hours a week doing homework, but 67% spend at least this much time in front of the TV.
- One-quarter of fourth-graders watch six or more hours of television *per day*.
- Preschool children are the nation's largest television audience. Between ages 3 and 5, the *average* preschooler watches 28 hours of TV a week.
- Black youths watch TV an average of 39% more than white youths do, and this differential is almost certainly greater among poor minority youths in the inner city.
- By contrast, Japanese youngsters spend twice as much time reading as their American counterparts do, and five times as much time doing homework.

As Marie Winn puts it, a sort of "Gresham's Law of Child Activity seems to operate here: Passive amusements will drive out active amusements." For instance, in a survey of more than 500 fourth- and fifth-graders, when asked what activity they would prefer if they had nothing else to do, *every* child chose television over reading — of any kind.

Television and Learning

Children's immersion in the culture of television watching could imperil their academic achievement in one obvious way: Every hour spent in front of the TV is an hour that will *not* be available for uninterrupted reading, homework, or other mind-enhancing activities. If a child by age 10 has watched an average of 20 hours of TV per week, he or she will be *10,000 hours poorer* in terms of learning time lost.

> *"We shouldn't think the only way to get kids interested in science and math is to make these subjects as much like MTV as possible."*
>
> **Dr. John M. Sumansky**
> President, Toshiba America Foundation

But there are signs that extensive TV viewing has an even more destructive effect than the mere squandering of time. The assumption that television retards children's intellectual development, says Winn, is strengthened by the "mysterious decline," beginning in 1964, in the test scores of high school students taking the college board exams. That, she points out, "is precisely the year that those first children exposed to large doses of television during their language-learning years sat down to take their college boards."

Winn further notes that television had made its way into nearly all American homes by 1975, and so (in the mid-1970s) forecast that the decline in achievement-test scores "should continue until around 1988, when the 1975 crop of three-year-olds reaches college board age." She wasn't far off. The two-decade slide in verbal and math scores actually ended between 1983 and 1985, almost exactly when the demographics of television watching would have predicted.

Other studies make an even stron

DAVID M. GROSS/AAAS

Reading strengthens children's ability to develop "mental models" an essential aspect of scientific problem-solving.

ection between television and
ng problems . According to the
ational Testing Service (ETS),
TV viewers are some 8% less pro-
t in science in the third grade, 9%
roficient in the seventh grade, and
ess proficient in the 11th grade —
he kind of accelerating decline
mpaired higher-order thinking
would bring about. The results
similar for mathematics. And an
istive literature review, conducted
o Dutch scientists and published
journal *Reading Research Quarterly*
88, discovered that television view-
npedes the growth of children's
g skills — particularly the more
ced thinking processes needed for
r-level comprehension.
levision — that favorite childhood
s of killing time — evidently is
g much else besides.

Two-Minute Mind

e epitaph of a generation.
ins 15-year-old Toby Bush to *The*
ington Post: "We like action, excite-
suspense, to see something hap-
g every second."
teacher likewise concedes to edu-
al psychologist Jane Healy that
ren today are definitely harder to
They expect learning to be 'fun,'
ney can't wait for anything. . . .
iggest concern is that they can't
through problems."
d a nationwide study shows that
ny as 4.5 million schoolchildren
from attention-deficit disorder —
s many as half the students in
classrooms have been diagnosed
peractive.
uld television be responsible?
aly, the author of *Endangered*
, one of the most insightful
s on learning and education to be
shed in the last decade, thinks so.
ren, she says, are afflicted today
what she calls a "two-minute
" — a condition in which they
muster "the mental organization
] and sustained attention
demanded by reading" and many other higher-level intellectual activities.

In the schoolroom as well, Healy adds, years of television and video watching have produced children who need "the classroom equivalent of special effects" to hold their attention, and who devise their own "special effects" (like drawing pictures or daydreaming) when their academic studies don't provide the roller coaster thrills of a "Miami Vice" or "Robocop" or Saturday morning cartoons.

DAVID M. GROSSMAN

The average preschooler watches 28 hours of television a week.

Addicted to Alpha

But television, contends Healy, militates against intellectual development in still more insidious ways than this. Perhaps most troubling is that it may undermine critical problem-solving skills. For instance, in the Dutch study, heavy TV viewing appeared to "shorten the time children [were] willing to spend on finding an answer to intellectual problems" they were given to solve.

Jennings Bryant, a children's-television researcher at the University of Alabama, echoes this finding. "One thing we do know," he explains to Healy, "is that [television] reduces what we call vigilance," or the ability to stay actively focused on a task. "If [children] watch lots of fast-paced programs and then we give them . . . reading or complex puzzles, their stick-to-itiveness is diminished; they're not as willing to stay with the task. . . . This is especially critical with relatively young children — about 3 to 5 years seem to be particularly vulnerable times."

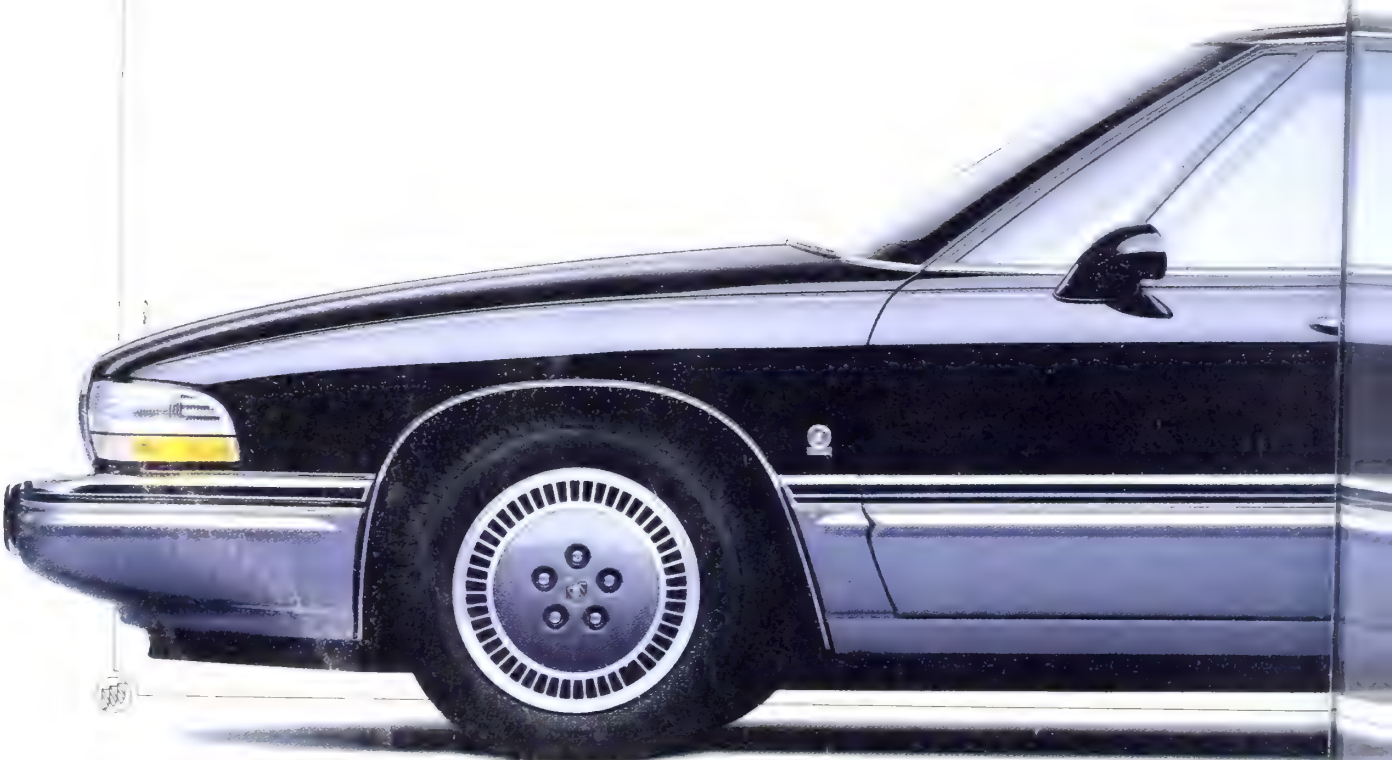
Television, says Marie Winn, also makes it more difficult for young people to form mental representations — exactly the kind of "mental models" that are central to effective higher-order thinking. As opposed to the mental activity that takes place during reading, scientific exploration, or mathematical game-playing, Winn notes, "the mind does not have to decode and manipulate during the television experience." She speculates that this reduced practice in "inner picture-making" leaves children mentally blind when they are forced to read or are being read or lectured to. As a result, their attention wanders, and their minds turn off.

Lastly, television appears to promote a passive approach to both leisure and learning — in Winn's and Healy's view, an "addiction" to the relaxing alpha waves in the brain brought on by uninvolved television watching. As one neuropsychologist tells Healy, "You raise kids on sweets, they become addicted to sweets. You raise kids on alpha [waves], they get addicted to alpha."

Observers and Participants

A variety of animal experiments confirm the dulling effects of passive involvement with one's environment. In one famous study, pairs of kittens were exposed to the same toy-rich environment. One kitten in each pair was

According to the experts at "MotorWeek," the best luxury car isn't a Lexus, a Lincoln, a BMW, or a Mercedes-Benz.



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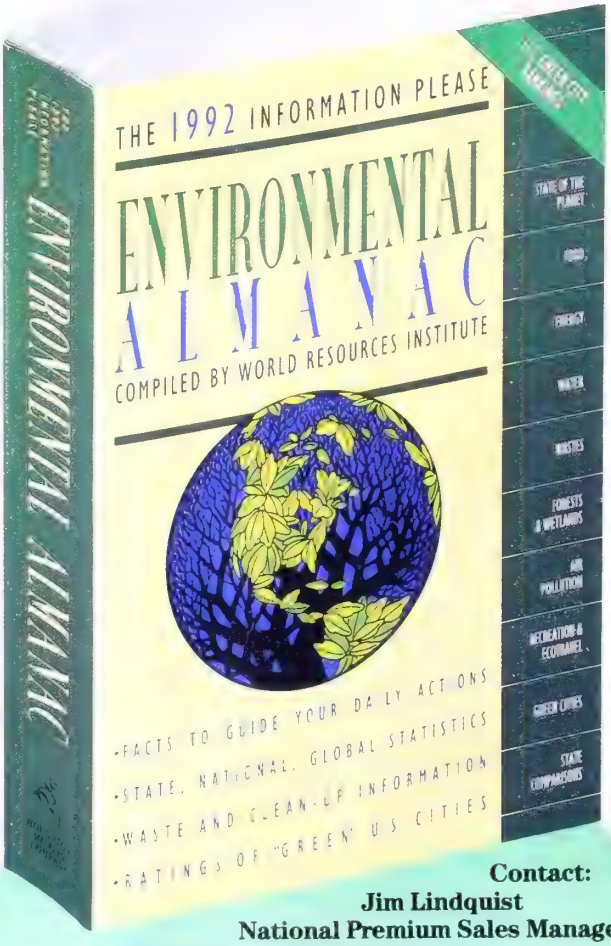

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itted to play with the toys for
each day; the other merely
d on, suspended in a gondola, pas-
attending to its environment in
me way that children watch peo-
ngaging in activities on TV. At the
f the test, the active kitten had
oped a sophisticated visual sense,
vas able to accurately discriminate
g visual images in its environ-
the passive kitten had learned
t nothing.
a similar experiment carried out
ts at the University of California
keley, researchers arrived at nearly
ical results. Rats growing up in a
ch environment became much
active explorers than rats that
o toys. Significantly, rats raised in
nriched environment but not per-
d to play with the toys proved to
more curious than rats that were
without any toys.
uman children, of course, are
different creatures than either
s or rats. But their thinking pro-
, although widely different in
e, operate according to the same
mental mechanisms. And so
iments like these — not to men-
he television studies themselves —
be viewed with great concern.
rhaps Jerre Levy, a biopsychologist
University of Chicago, says it
'I think brains are designed to
cognitive challenges," she tells
Healy. "It's just like muscles: If you
exercise them, they wither. If you
exercise brains, they wither," too.

ELOPING THINKING SKILLS

ators tend to be an optimistic
. As well they should be: Every
hey see the proof of their effec-
ess right before their eyes. *They are*
ing lives. Few things must be more
rding — and confidence-building —
choolteacher than to witness the
of awareness as a child suddenly
rstands what he's being taught.
his optimism also can be fueled by
y reported successes in teaching
science and mathematics. Surely the most impressive of these remains Jaime Escalante's achievements with poor Hispanic kids in the barrios of Los Angeles (see box). Many of Escalante's lesser-known but equally determined

COURTESY OF IBM

"Low-tech" play and problem-solving are vital to developing thinking skills.

colleagues must look at his spectacular accomplishments and think: *I can do that, too.*

The analogies often used to describe thinking skills lend credence to this belief. If the only traits poorly performing science and math students need to develop are scientific "habits of mind," won't a little more intellectual discipline do the trick? If minds truly are like muscles, won't an increase in mental exercise build strong intellects, no matter when that exercise takes place?

Many respected educators think so. Asa Hilliard, a professor of urban education at Georgia State University, insists that, "generally, even those students who have fallen far behind in their mathematics achievement can close the gap between themselves and other students within a relatively brief time, if a high-quality instructional program is offered to them."

And yet, despite this optimism, much troubling evidence remains: the fact that early deficiencies in math and other subjects tend to persist throughout children's school years; the high correlations, in nearly every study, between intellectual ability in early childhood and that in adulthood; and the fact that a great many youngsters do *not* learn math, no matter how well it is taught.

But perhaps most disturbing of all is this conclusion from the National Research Council's enlightening report *Everybody Counts:* "Despite massive effort," the council says, "relatively little is accomplished by [educational] remediation programs. No one — not educators, mathematicians, or researchers — knows how to reverse a consistent early pattern of low achievement and failure."

The Mystery of Head Start

The widely heralded Head Start program would seem to belie this assessment. Inaugurated in the mid-1960s as part of Lyndon Johnson's "War on Poverty," the nationwide preschool program for disadvantaged children continues to win high marks from liberals and conservatives alike. Few in the political sphere would dispute Lisbeth Schorr's assertion in *Within Our Reach* that "the original rationale for Head Start . . . applies with even greater force today. Over the last 20 years the long-term benefits of preschool care have been solidly documented."

Careful research shows that Head Start and related programs, mostly for 4- and 5-year-olds, often do produce notable results: reduced placements in special-education classes; fewer retentions in grade; lower high school dropout rates; higher enrollment rates in post-secondary schooling; and higher employment levels. Important as they are, though, these gains all appear to stem from changes in young people's behavior rather than in their basic abilities. For one of the most sought-after improvements has been almost wholly lacking in these programs: *Long-term gains in intellectual performance.*

continued

TURNING KIDS ON WITH TECHNOLOGY

ED LEDERMAN

The Sony View System, interactive multimedia system developed by Sony and Texas Learning Technology Group.

The cowboy swaggers into the empty saloon and takes a seat, slowly methodically, he sets out three squat glasses on the table in front of him and fills them with clear liquids.

Then he snaps out a deck of cards. "Wanna see a card trick?"

The grim-faced bartender, unsure of the man's intent, just nods.

The cowboy dips the queen of diamonds into one of the glasses; there's a sizzle and the bottom half of the card disintegrates. "Sulfuric acid," he says.

A black queen goes into the second glass. The same thing happens: half the card disappears. "Sodium hydroxide," he offers flatly.

Now, he holds the ace of spades over the last glass. "Equal parts sulfuric acid and sodium hydroxide, mixed together. Whaddya think'll happen?"

The bartender shakes his head. "I don't know."

The cowboy dunks the card; this time, *nothing* happens. "It gets wet!" He clearly enjoys the other man's discomfort.

The bartender still looks on, puzzled. "Well, I guess the sulfuric acid and the sodium hydroxide ... They must've neutralized each other's destructive properties. Sorta like hot water and cold water make lukewarm water.

A long pause.

"Pretty good analogy, stranger," the tough-talking cowboy says, not nearly as tough-talking as before.

MULTIMEDIA SCIENCE

Cowboys, bartenders, and card tricks aren't the normal stuff of middle-school science. But they are for the Austin-based Texas Learning Technology Group (TLTG). Established in 1985, TLTG pledged to bring modern technology into the classroom — and fun back into learning science.

The group has done just that with TLTG Physical Science, a 160-hour multimedia package that covers all the key topics in the traditional year-long physical science course, but with videodiscs, touch-screen simulation teacher demonstrations, and real-world lab activities in addition to written materials.

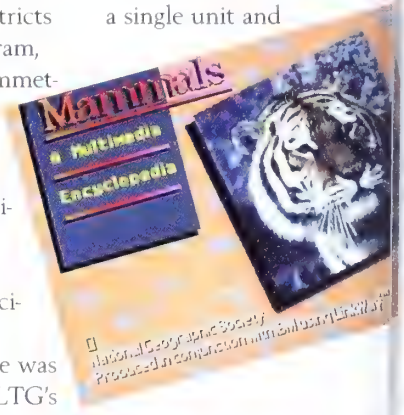
This multiple-media approach to science instruction, studies show, increases students' attention levels and comprehension, and also does more to maintain their interest over the year than the usual chalk-and-talk science lessons do — factors that translate directly into academic success.

Nationally, 50% of students fail introductory physical science. But in districts using the TLTG program, failure rates have plummeted to only 5%, with the lowest-achieving classes showing the greatest gains. At Madison High School in Houston, half the students failed physical science the year before TLTG Physical Science was introduced. During TLTG's inaugural year, there were no failures the first semester and only four the second.

The program also appears to boost higher-level course-taking in science. The Jefferson, Texas, school district used to teach physics and chemistry in alternate years because of a lack of student interest. Now, student demand is so high that the district has to offer two sections of chemistry and one of physics — each year. In Mercedes, Texas, enrollment in chemistry is almost 10 times what it was before TLTG came to town.

TECHNOLOGY AND TEACHING

In order to take the greatest advantage of the new teaching technologies, TLTG created its courseware in conjunction with such high-tech innovators as Sony and IBM. "Sony worked very closely with TLTG to develop products that fit its requirements," explains Jim Sandy, marketing director for Sony Multimedia Systems Group. "Teachers like the Sony VIEW System" — a combination microcomputer, videodisc player, and touch-screen monitor — "because it is a single unit and



is easy to set up. School districts like it because it's affordable."

Sony hasn't stopped at making classroom-oriented devices like its VIEW System, however. The company's Laser Library CD-ROM system, which hit the market earlier this year, puts high-volume text storage, motion and video capabilities, and the high-quality sound of compact discs within reach of individual users. ■

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chnical computing
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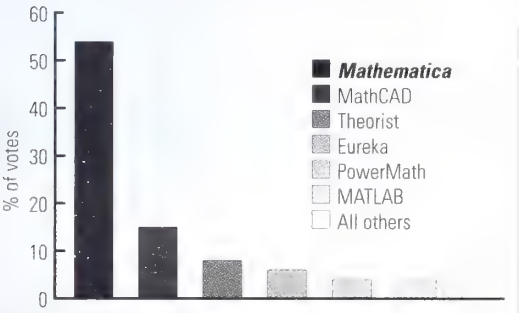

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A 1985 study, prepared for the U.S. Department of Health and Human Services, analyzed more than 200 evaluations of Head Start. Its conclusion: Although Head Start participants' scores on tests of intellectual ability rise while they're attending classes, their scores over the long run "do not remain superior to those of disadvantaged children who did not attend Head Start." In fact, says Ron Haskins of the U.S. House Committee on Ways and Means, none of the differences in intellectual ability between the two groups of students is "educationally meaningful after the first year of schooling."

An evaluation of 11 other preschool programs for 4- and 5-year-olds, called the Consortium of Longitudinal Studies, reached almost identical findings. Child psychologists Sandra Scarr and Jeffrey Arnett explain: "The consistent result across the studies was that, although all of the children were reported to have had IQ gains immediately following the intervention, in almost all cases this result was followed by a steady decline. Thus, . . . 3 or 4 years after the termination of the intervention, the IQs *did not differ* between the experimental and comparison groups." Even in the highly acclaimed Perry Preschool Project, large test-score differences of 12 points at age 5 shrink to an insignificant two points by age 8, and vanish thereafter.

Early Versus Late

Indeed, the only educational interventions that appear to bring about long-term gains in intellectual capabilities are programs that begin in the first two or three years of life. One study carried out in Colombia, for instance, showed that gains in mental development were some *5½ times greater* if educational enrichment began at 3½ years of age than if it started just 21 months later.

The most frequently cited early-education program in the United States is the Carolina Abecedarian Project, in which trained social workers visited the homes of economically disadvantaged mothers two or more times a week over the course of several months, typically starting their visits when the child was a few months old. The social worker brought toys and books, which she left with the family after carefully showing the mother how to use them to stimulate the child's interest and attention.

Development of the thinking skills needed for scientific and mathematical literacy begins at an early age.

Throughout the preschool years — as with Head Start and subsequent programs — children enrolled in the Carolina project performed significantly better on mental-ability tests than children not in the project, with differences in average scores as high as 15 points. But after school had begun and the home visits ended, although improvements in intellectual performance tapered off somewhat, the participating children maintained a substantial intellectual edge over nonparticipating children.

In a similar home-visit arrangement in New York, called the "Mother-Child Home Program," children who were involved with the program for two years gained an average of 28 IQ points, while those not in the program actually *lost* an average of six IQ points — and again, most of these differences persisted throughout elementary school. And in a Milwaukee program, in which severely economically disadvantaged children from 3 months to 6 years old spent 40 hours a week in a highly stimulating child-care center, participating children reached late elementary school with IQ scores some 20 points higher than those of otherwise comparable, nonparticipating youngsters.

Deprivation and Development

Developmental differences like these are even more pronounced for children *adopted* out of economically deprived conditions, whose entire living environments are transformed. In terms of intellectual ability, report New York University's Catherine Tamis-LeMonda and Marc Bornstein, children removed from foster-care institutions and placed in intact families "earlier in their lives fare better than children adopted out later, . . . and those adopted at birth may achieve IQ scores *equivalent* to their adoptive siblings."

Differences in ability according to the timing of adoption can be quite striking. One study in the early 1970s involved Lebanese children adopted out of an extremely impoverished orphanage. Although the children's developmental scores at the time averaged around 50 — indicating severe mental

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retardation — those who were adopted by age 2 eventually achieved IQs averaging 96. However, those adopted in the next two years reached an average IQ of only 80; and those adopted after age four achieved even lower IQs, many remaining severely retarded.

More importantly, observes California State University psychologist Kevin McDonald, the *rate* of mental development was significantly higher in the children adopted at a younger age. Such findings, he says, clearly show that there is "a sensitive [developmental] period beginning around age 2, after which the effects of environmental deprivation are difficult to reverse."

In cases of extreme deprivation, in fact, this cutoff point can come even earlier. One widely cited study examined Guatemalan children who, as part of the traditional practices of their rural culture, spent their first year of life in small, dark huts with almost no toys to play with and no conversation from their mothers. At the end of that year, investigators discovered, the children had severe mental retardation, testing well below children of the same age from the United States. However, by age 11, after having spent the intervening 10 years living in a more stimulating environment, the youngsters performed as well on most intellectual tests as did youths both in the United States and urban Guatemala.

This study is often taken as proof that children's intellectual abilities can reach acceptable levels no matter how deprived they may have been as infants. But a follow-up study, six years later, suggests otherwise. Investigators retested the rural Guatemalan youngsters, using a tougher examination that measured the higher-order thinking skills children were supposed to have mastered by their mid-teens. On the more complex tests, the rural childre performed at considerably lower leve than did middle-class U.S. children, a were two to three years behind Gua malan children raised in a larger, mo modern town.

Neural Architecture

What could account for these odd p terns of development? Why should intellectual deprivations early in life so hard to counteract later on?

The explanation for this phenomenon, as it turns out, lies not in t realm of science and mathematics nc even education, but in child develop ment — and with a relationship rarel acknowledged in public debate. Quit simply, mental capabilities, like all ot human talents, have a physical basis in this case, the processing abilities o the human brain. Although the brai remains the m mysterious of human organs, is reasonable t assume, says Patricia Goldm Rakic, a neuro gist at the Yale University Sch of Medicine, t a given adult mental functi "can emerge o if the proper c nections and circuitry nece sary to carry o that function" in place.

It is well known that t human brain sists of four n elements. First are the tens of billions of *neu rons,* or brain cells, that serv the brain's ch

As children explore and analyze patterns in their everyday world they build up the "neural architecture" that makes higher-level thinking possible.

ocessing centers, receiving and
g out electrical nerve impulses.
d are the interconnections
en brain cells (averaging 10,000
re per cell), formed by cell
nes called *axons* and *dendrites.*
are the *synapses* — the points of
ontact where the branches from
ll chemically "communicate"
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r. And fourth is the *myelin*
the fatty tissue that insulates
ls' branches, much like rubber
nding a copper wire, thereby
sing brain cells' efficiency in
itting their nerve impulses.
st of this "neural architecture"
ps very early in a child's life —
of it before birth. Indeed, as
ogist Richard Restak has noted,
uman brain approaches its adult
eight, and number of cells by
Recent research has also estab-
that 80% of the brain's intercon-
ns between cells are in place by
Although the brain will contin-
develop "at a more modest pace
least another decade," notes child
ologist Michael Cole, "a great
the brain structure that will
ally support adult [thinking and
or] appears to be present by the
the second year."

ually, brain development is even
complicated than this. During
ncy and early infancy, brain cells
out with abandon, creating
nterconnections than will be
d in adulthood — a condition that
neurologists believe is responsi-
the phenomenally rapid learn-
es of young children. This explo-
synaptic connections reaches its
num density by about age 2, after
the brain begins pruning con-
ns that aren't being used. In a
eal sense, then, neural pathways
en't exercised *do* "wither away."

Physical Basis of Thinking

effect do all these neural machi-
s have on learning and higher-order thinking skills? A great deal. As Goldman-Rakic suggests, if the connections required for these tasks aren't fully in place, thinking skills will be impaired: Nerve impulses can't be transmitted over pathways that don't develop or are pruned because of nonuse. And if the connecting paths that do exist aren't adequately insulated, the efficiency of transmission — and hence of thinking — may fall.

> *"The most serious problem we face in science and math education is that a great number of kids don't even come to school prepared to learn."*
>
> **Dr. Walter E. Massey**
> Director, National Science Foundation

This relationship between early brain development and thinking capabilities has been demonstrated most clearly in studies of malnutrition. Autopsies of malnourished infants who died in their first year of life reveal markedly fewer brain cells, and, it appears, a less enriched neural network than well-nourished infants do. In fact, one laboratory study of rats who were poorly nourished both before and after birth documented a *60% reduction* in the number of brain cells. Nutrition levels also appear to affect the extent of myelin formation around cell connections.

These findings are noteworthy because the very malnourished infants whose brain growth has been impeded are also predisposed to *intellectual* impairments. In a study of American Indian children, Ernesto Pollitt of the Massachusetts Institute of Technology found that the average intellectual capabilities of children who had been severely malnourished as infants were some *50% lower* than those of poor children who had not been malnourished. And the aspects of mental ability that were most seriously affected? Those higher-order skills most critical to later science and mathematics achievement: memory, abstract reasoning, analytical thinking, and verbal ability.

Intellectual Nourishment

Just as essential to brain growth as physical nourishment is *intellectual* nourishment. "There can no longer be any doubt," says Marie Winn, "that many aspects of brain anatomy and chemistry *are* changed by [the degree of intellectual] stimulation."

The most sophisticated studies of this question have been carried out at the University of California at Berkeley, under the direction of Marian Diamond, Mark Rozenzweig, and Michael Renner. The research group placed infant rats in either an "enriched" environment (with toys, learning exercises, and other rats) or an "impoverished" environment (with none of these).

The differences in brain development between the "enriched" and "impoverished" rats have been astounding. When autopsied, the brains of "enriched" rats have displayed substantially larger brain cells, increased levels of an enzyme that promotes learning, up to 42% greater blood (and hence oxygen) flow through the brain, significantly thicker cerebral cortices (the "thinking" part of the brain), and some 20% to 25% more cell interconnections.

These physical changes have been accompanied by changes in behavior. While enriched rats are no more skilled than impoverished rats in responding to relatively simple mental challenges (like Pavlovian conditioning), they prove considerably more capable of handling complex problem-solving

continued

tasks (such as moving obstacles blocking their food compartment). In maze tests, the enriched rats also learn more quickly and accurately, and, even when they're not being tested, engage in more active and systematic exploration of their environment — just the kind of behavior that, in human infants, promotes rapid intellectual growth.

The Human Environment

While it's obviously not possible to conduct laboratory tests like these on people, most field studies of intellectual development produce intriguingly similar results. In his review of research in this area, for instance, New York University's Bornstein found that the variety of stimulants in a child's environment (toys, games, and books) was "consistently and pervasively" associated with intellectual development between 18 months and 3½ years of age.

University of North Carolina child psychologist David McPhee has also looked carefully at the longitudinal research on this question, and his findings mirror Bornstein's. "One of the best general predictors of [infant] cognitive development," he says, "is the presence of age-appropriate play materials." By contrast, a "barrage of unstructured stimulation," such as "the television going full blast and the lack of a . . . place where the child can escape for quiet moments alone" actually *undermines* children's intellectual growth.

Even more important than the "play" environment is the quality of adult communication. The parents' verbal responsiveness to the growing infant, says McPhee, "is perhaps the greatest single influence on early cognitive development. Virtually all studies including this variable have found that it is one of the best predictors of later intelligence." For instance, University of North Carolina child psychologist Craig Ramey found that, even among members of the same social class, differences in mothers' attitudes, behaviors, and interaction with their children accounted for *between 50% and 65%* of the variations in the children's intelligence-test scores by age 3.

Verbal stimulation is related to children's intellectual development for a very simple reason: Words and ideas are the "intellectual food" of the brain, nourishment that determines which neural pathways will be strengthened and survive, and which will remain unused and die. In the first four years of life, explains George Washington University child psychologist Stanley Greenspan, children are "encountering a large and complex world," of which they seek to make sense by observing and analyzing *patterns* — relationships between names and objects, between their own actions and others' responses, and so on. These observations then become encoded into the young brains as an array of neural connections.

As children's experiences accumulate, these neural connections become more well-defined, allowing the children to more actively draw on them as a basis for logical thinking, problem-solving and communicating their thoughts. In arbitrary environments, however, in which verbal responses are rare or inconsistent, these neural connections may not develop, and, says Greenspan, "children tend to become overly concrete [and] devoid of basic literacy skills such as the ability to see abstractions."

Are Minds Plastic?

Worrisome as they are, these influences on early brain development take on added urgency because of one fact: Neural connections that don't develop within the child's first five years of life may never develop at all. As Jane Healy accurately summarizes, "It is much more difficult . . . to reorganize a brain than to organize it in the first place."

Studies of some profound types of brain damage suggest this is so. "Lazy eye" syndrome, in which one eye refuses to focus, must be corrected by about age 5 (by intermittently patching the "good" eye), or the neural connections necessary for binocular vision will never form. Likewise, children under age 2 quickly overcome brain lesions in the left hemisphere that cause loss of speech, but older children recover much more slowly (and less completely), and many adults never recover.

Experiments on rats and other animals show this same loss of "plasticity"

The quality of adult communication influences a child's early intellectual developme

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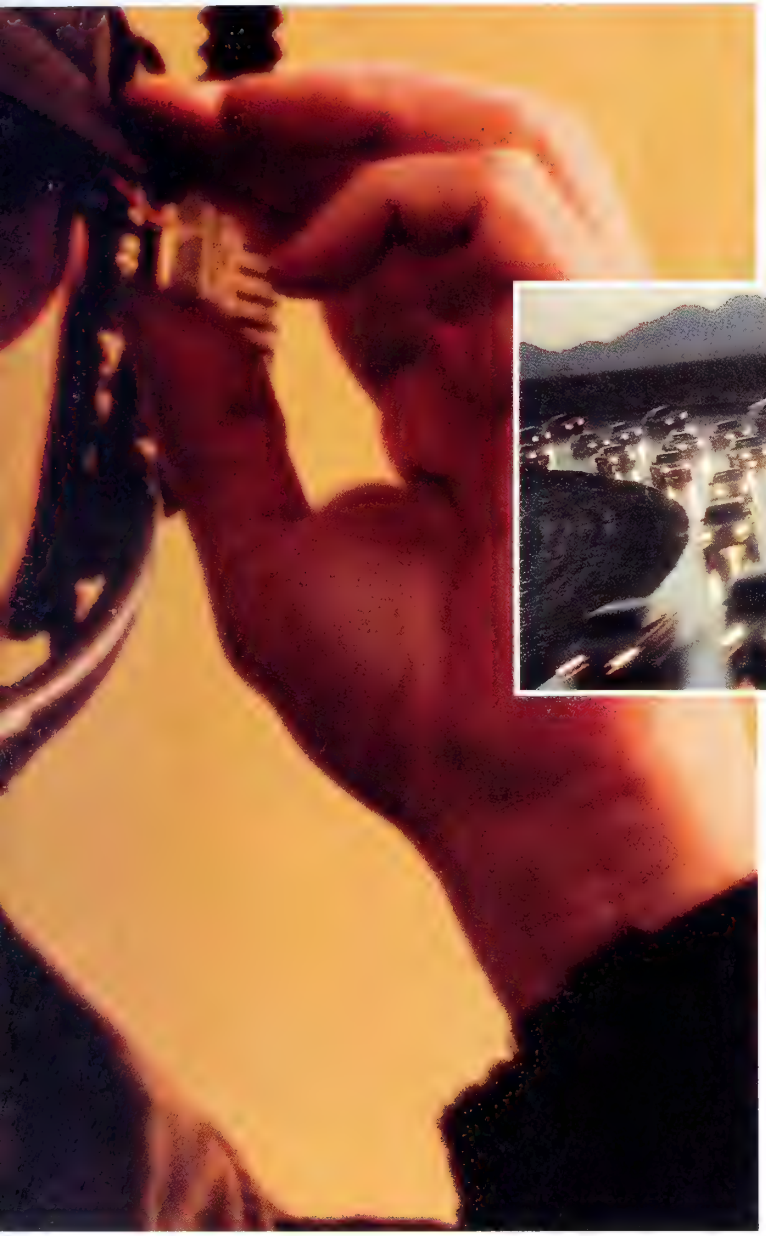

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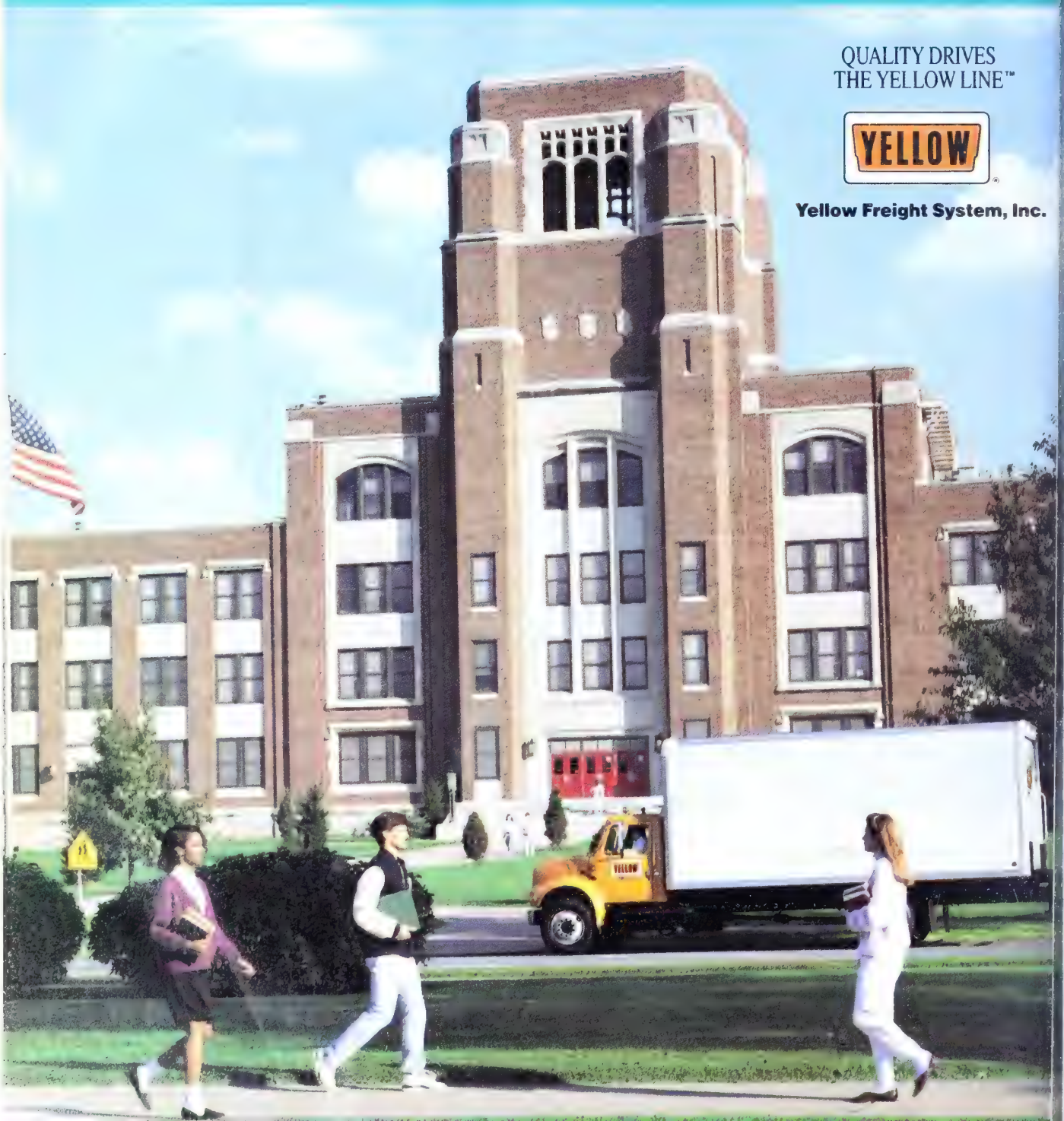

brain ages. In the most notable
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36 measures, and most only by a
amount. In addition, the new
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? Between ages 3 and 4.

ees and Probabilities

of this is to say that a child who
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will go on to achieve great things
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struggling in normal classroom
ions, while better prepared chil-
surge ahead. Even heroic efforts
not be enough. As developmen-
ychologist Theodore Wachs
aptly cautions, high-quality programs like Head Start still "may be getting to these . . . children much later in life than they should be.

"Perhaps," he adds, "three years too late."

YOUNG MINDS AT RISK

Uncomfortable times demand uncomfortable truths. In science and math education, disciplines under siege from both inside and outside the profession, perhaps the most uncomfortable truth is that millions of children are now entering grade school unprepared to benefit from the science and math curriculum, no matter how well it might be structured. Nor is this a random risk. As in so many areas of social policy, those children in greatest jeopardy are the members of minority groups. Consider:

> *"Serious gaps in the academic preparation of our students can be traced back to a lack of prenatal care and nutrition."*
>
> **Robert E. Allen**
> Chairman and CEO, AT&T

- The proportion of pregnant black women receiving late or no prenatal care has climbed by almost a quarter since 1980, and remains more than twice as great as the proportion among whites. Two out of every five black mothers get no prenatal care whatsoever in the first trimester of pregnancy.
- Black mothers are twice as likely as whites to have a baby with a low birth weight (below about 5½ lbs.) and *three times as likely* to have a baby with a very low birth weight (below about 3½ lbs.).
- Some 60% of births to black mothers overall, and 75% to 80% of black births in the inner cities, take place outside of marriage. One-fourth of all black births occur to teenagers, almost 90% of whom aren't married.
- Nearly three-fourths of the children under age 6 in families headed by unmarried black mothers are living in poverty.
- In schools, serious discipline problems are 2½ times as prevalent in the inner cities as in the suburbs, and serious outbreaks of violence more than three times as common.

Statistics like these aren't the usual parameters of science and math achievement. But for the coming decade, given the problems discussed above, they may be among the most important.

Low Birth Weights

The assault on minority children's academic futures often begins in the womb. Surveys in the 1970s showed that the nutrition levels of nearly 60% of poor women (and even higher proportions of poor *minority* women) were so low as to threaten the brain development of their unborn children.

More recently, in her visits to child-development centers that track the progress of children with low birth weights, Lisbeth Schorr discovered "rates of learning disability running as high as 40% to 45% as well as high rates of poor language development and reading problems, difficulty with abstract concepts, poor impulse control, and attention deficit disorder." Among children with very low birth weights, *more than* 70% exhibit some deficiencies in intellectual performance.

These learning difficulties often remain with young people throughout their childhoods. For instance, by age 4, average IQ scores among children born underweight can be as much as 27 percentage points below those of other children. And among five-year-olds, those with low birth weights are more than twice as likely as other children to

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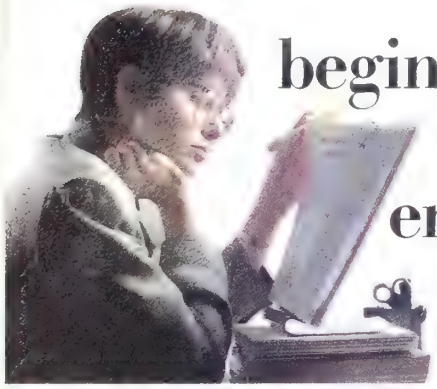

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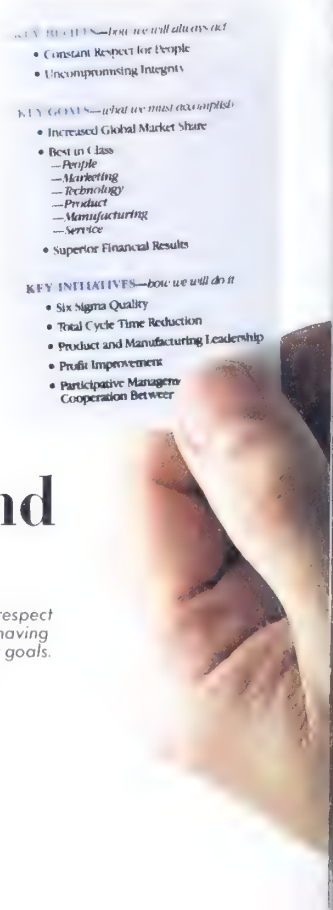

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suffer from learning and adjustment problems.

One study, in fact, found that intellectual performance actually deteriorated as these children were forced to learn more complicated tasks. Among children with very low birth weights who fell within the normal intellectual range at age 5, some 80% experienced *declines* in mental ability as they progressed through elementary school.

The Children of Teen Mothers

Aside from the possible complications resulting from low birth weight, children of poor, unmarried mothers are at risk intellectually in other ways as well. Up to one-quarter of poor children, for instance, may be in danger of impaired brain development due to malnutrition occurring between ages 1 and 4. Large numbers of children also enter school suffering from untreated health problems, like ear infections and lead poisoning, that can permanently affect their learning ability.

But merely being the child of a teenage mother itself can have harmful effects. Demographer Wendy Baldwin examined IQ scores for these and other youngsters in the 1970s, and found that, compared with children of older mothers, four times as high a proportion of children born to adolescents had IQ scores lower than 70. Other studies have shown that the children of teenage mothers have lower average IQs overall, and that their achievement levels in reading, spelling, and arithmetic at age 7 are considerably below those of other kids.

These intellectual problems appear to arise in large part because of deficiencies in the child's early learning environment. For example, in one study, low-income teenage mothers scored only 2.3 on a scale of 9 in reinforcing their 1-year-old's vocalizations, and the infants, in turn, scored only 2.7 on the same scale in responding to their mother's words — levels far below those for other mothers and their children. At age 2, the quality of mother-child communication in these families remained poor. Elizabeth McAnarney, chief of pediatrics at the University of Rochester Medical Center and director of the studies, hypothesizes that "the subsequent intellectual and behavioral problems seen in the children of adolescents have their genesis in the [poor-quality] communication . . . early in the children's lives."

In addition, say child-development specialists, teen mothers are much more likely than older moms to interfere with their infant's play — distracting the child, interrupting exploratory activities, and generally preventing the infant from carrying out learning pursuits that are essential to normal intellectual growth.

Spoken to Hardly at All

Adolescent mothers are not only young, but most are also poor, and their lower socioeconomic status contributes independently to children's low achievement levels — a problem that imperils the offspring of many poor mothers in their 20s and 30s as well.

> *"In low socio-economic-status homes, everyone talks about the baby, but rarely to the baby."*
>
> **Shirley Heath**
> Stanford University

"Children who begin life in poverty are already at a disadvantage when they enter kindergarten," contends economist Sylvia Hewlett, author of *When the Bough Breaks,* "and a shortage of resources dogs them relentlessly through every stage of the educational process." Mathematics achievement is one early casualty. The Educational Testing Service has found that students' socioeconomic status accounts for a large part of the math performance gap between poor and economically better-off students.

It isn't just families' low incomes that cause these differences in achievement, however. As in the homes of teenage mothers, the limited, often poor-quality intellectual stimulation in a great many lower socioeconomic-status (SES) homes (whether or not the mother is a teenager) also undermines children's intellectual development — sometimes severely.

Overall, parents in these low-SES homes appear to devote dramatically less attention, of any kind, to their children's intellectual growth than high-SES parents do. A study conducted in the early 1980s by sociologist Zena Smith Blau showed that only 9% of high-SES mothers, but 48% of white and 59% of black low-SES mothers, invested a "small amount" of time in their young children's intellectual activities. By contrast, 64% of the high-SES moms but fewer than 10% of the low-SES moms devoted a "large amount" of time to this task.

These differences in the quality and extent of the mother's commitment to the child's intellectual growth show up most strongly in two areas: communication and play. Shirley Heath, a linguist at Stanford University, carried out a detailed comparative study of early literacy development in high- and low-SES communities in the early 1980s. Her findings, published in her book *Ways with Words,* are eye-opening.

In general, reports Heath, babies in the low-SES homes "are in the midst of nearly constant human communication. . . . They are listeners and observers in a stream" of conversation in which "everyone talks *about* the baby, but rarely *to* the baby." In fact, during their first six to 12 months of life, babies usually aren't even directly addressed by adults. Nor do most

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effective schools can all children learn to their fullest potential.

appear to put much effort into
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When infants begin to utter
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imilar parental laissez-faire gov-
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" At best, when a baby is old
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mpany of others."
he conditions Heath relates
familiar, they should. As noted, they are the very aspects of the early learning environment that child psychologists have identified with impaired intellectual and brain development. The cost of these conditions is as tragic as it is inevitable.

The director of a center for impoverished preschool children in Harlem summed up these small misfortunes by explaining that "child after child" from poor Harlem families arrives at school "virtually mute, unable to speak a single intelligible sentence." And the problem's cause? "Most often," the director told Marie Winn, "I have found it to be simply the result of hearing bad English, listening to nothing but television, and being spoken to hardly at all."

Solace Amidst Dismay

It is hard to tell what proportion of low-SES homes these conditions describe — surely not all, as many millions of low-income families are caring, attentive, and intellectually nourishing. Still, these poor learning environments are apparently prevalent enough in the most disadvantaged segments of society to cause us considerable concern — and, in any case, their practical effect is clear. "Many children with fine potential are already educational failures by age 4," contends George Washington University's Greenspan, "because the critical establishment of learning capacity that occurs in the first three or four years of life has been defective, or its development has been ignored."

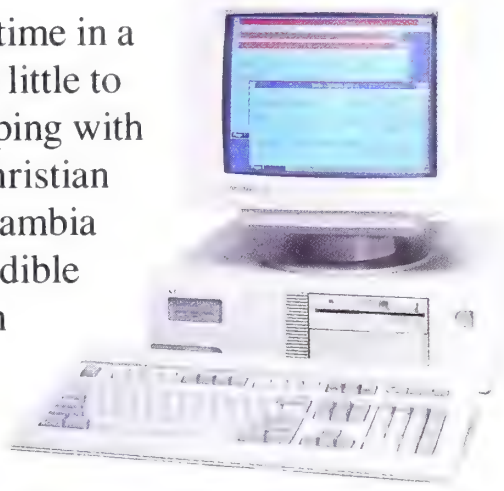
Unfortunately, these youngsters' prospects once they enter the classroom aren't much better. Even the best schools would have trouble reversing such crippling disadvantages, and the educational establishments to which the vast majority of impoverished minority children are confined are anything but the best. In fact, truth be told, many of these schools are abysmal places, where disorder and violence are the ruling ethic, where students are bored and teachers scared, and where learning takes place mainly by accident, and only rarely by design.

These characteristics of America's big-city schools have been so well documented that they need not be recounted in any more specificity here. Those interested in the details can consult any of the recent front-line chronicles of life in what we charitably call "educational" institutions for the urban poor: Jonathan Kozol's *Savage Inequalities;* Samuel Freedman's *Small Victories;* Quincy Howe's *Under Running Laughter;* Emily Sachar's *Shut Up and Let the Lady Teach;* and Bonita Brodt's probing series on Chicago's Goudy Elementary School in the *Chicago Tribune.* Compared with the prisons of despair depicted in these pages, the depressed Calvin Coolidge High of Bel Kaufman's classic 1964 novel, *Up the Down Staircase* — once the archetype of academic decline — was an intellectual Camelot.

All the same, there's at least some solace to be drawn from this dismay, for the last two academic mysteries have finally been resolved. We now have a much clearer idea why minority youths' relative science and math achievement scores have remained so low, and why the academic differences among students that exist at the outset of schooling are so difficult, if not impossible, to erase. ■

8:30 AM

NEC helps the children of Unda-Unda get food for breakfast and food for thought.



Morning is not normally a happy time in a
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FIGHTING FOR OUR FUTURE

PART 3

The NECESSARY REVOLUTION

"It is in the self-interest of both business and education to join forces in remaking the [nation's] schools. If they do not, the future of public education in the rest of this century is in doubt, and the very success of the American way of life is in jeopardy."

This grim prediction could have been uttered by any of America's leading education officials over the past several years. It was, in fact, the pronouncement of the country's top education official — in 1966.

That year, former U.S. Commissioner of Education Francis Keppel published a book entitled *The Necessary Revolution in American Education*, in which he called for a "revolution in educational quality" that would ensure all children the superior academic preparation that was then the safehold of a privileged few.

Regrettably, we are further away from this goal today than we were a quarter-century ago.

Nowhere is this more true than in science and math education. Not only do millions of children today reach adulthood grievously ignorant of the most basic scientific and mathematical concepts, but even among those who otherwise well-educated, a large propo tion remain less competent in these s jects than they will need to be as wor ers and citizens in the next century.

If we truly care about the well-be of all our nation's children, as well a our country's continued economic a political strength, we cannot allow t situation to persist. To paraphrase Keppel, we need to embark — now — on our own "necessary revolution" i science and mathematics education.

And this time, we need to do it ri

PREPARED TO LEARN

Imagine a computer maker whose co puters fail one out of every three ti they're shipped out. Through a serie of tests, the company determines th central-processing unit (CPU) board are being improperly manufactured. it wishes to stay in business, the firm doesn't then try to compensate for t error by adding a faster disk drive o doubling its computers' memory. It finds out what's going wrong in the CPU manufacturing process — and then fixes it.

Why don't we follow the same l when it comes to our nation's childr

Each year, hundreds of thousand of five-year-olds enter grade school

$E=MC^2$
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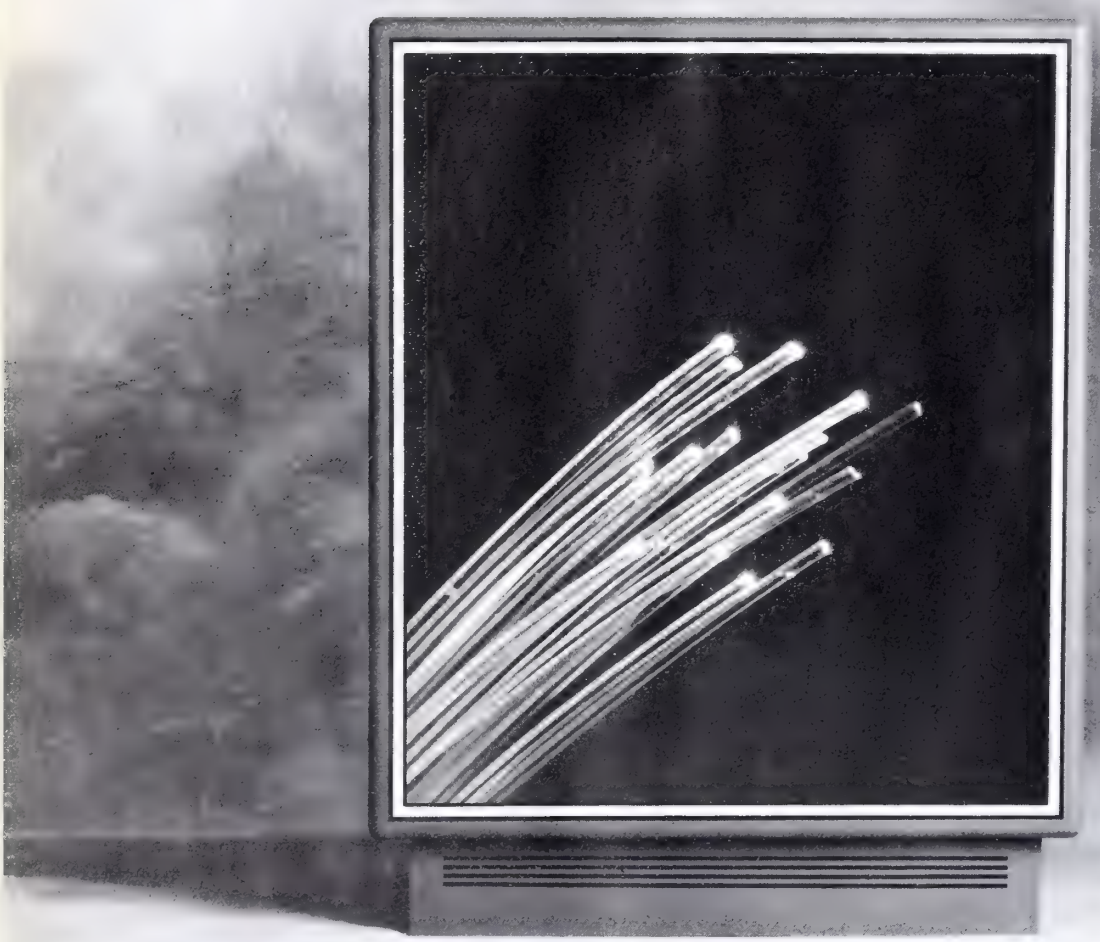
Science

THIS ISN'T THE FIBER OF TELECOMMUNICATIONS.



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unprepared to learn. Worse, because the time of their most rapid intellectual growth — and development of the underlying physical architecture — has already passed, these children may be left permanently behind their classmates, no matter what schools might do.

Yet almost none of the recent studies of science and math achievement, and few examinations of the state of education, generally confront this issue. Those that do usually urge only that we make Head Start services available to all young people, not just a few. But Head Start, as the research shows, is not enough. Worthy as it is, it gets to the most intellectually endangered kids years too late. Even if we were to "fully fund" the program, we would leave untold numbers of poor, mostly minority kids in grave intellectual jeopardy.

We must do more. Specifically, if we are to prevent the problems discussed in Part II, we must ensure:

- Universal use of early prenatal care as well as postnatal care.
- The availability of educational day care and early preschool programs for all poor children, beginning as early as infancy, in which age-appropriate games, toys, and creative activities — not long hours of idle TV watching — occupy the children's time.
- Adequate health care and nutrition for all poor children, provided in the context of these programs.
- Community-based home-visitation programs for poor adolescent mothers and other "at-risk" parents.
- Universal access to Head Start.

Merely making these services available will not be sufficient, however. The vast majority of poor, unmarried mothers already have access, for example, to food stamps, Medicaid, and free or low-cost prenatal care, yet the historical declines in the infant mortality rate (the most concrete indicator of infant health) have stalled in recent years. The problem, in a great many cases, is not that such services are unavailable, but that they are not being used.

Thus, as we have long required children between age 5 and 16 to attend school — for their own benefit as well as the nation's — we must now explore ways to ensure that younger children receive the care and intellectual stimulation they need *before* age 5, so that they may perform to their potential once they reach school. The most effective way of achieving this goal is to directly link public-assistance payments with the use of these services.

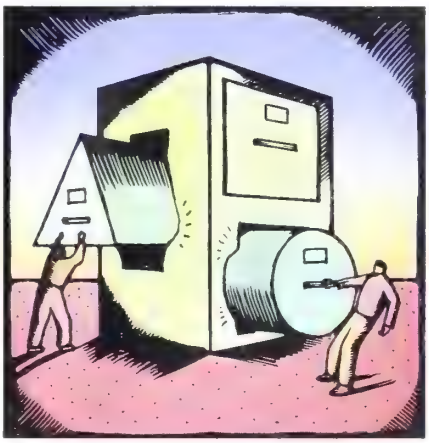

ILLUSTRATION BY RANDY CYRUS

Of course, the even higher value of individual liberty demands that no parent capable of providing financially for his or her family be forced to participate in these programs. But parents who turn to their fellow citizens for financial support must begin to accept the obligation that comes with that aid: protecting the health and well-being of their children. We are abdicating our responsibility as a society if we merely hand out the money and the Medicaid cards, then blindly turn our backs.

A CHOICE IN SCHOOLS

In his new book, *Savage Inequalities*, Johnathan Kozol searches for a metaphor for the inequalities in schooling for rich and poor, and settles on the image of a "tainted sports event." He admits the comparison is imperfect. "Unlike a tainted sports event," he writes, "a childhood cannot be played again. We are children only once; and, after those few years are gone, there is no second chance to make amends."

These trenchant words should be emblazoned on the wall of every schoolhouse, every corporate board room, every congressional office: children have only one chance to receive the education they need in order to prepare themselves for life and work, and after that one chance has passed, there are no more chances.

Yet what do most critics (Mr. Kozol among them) suggest as the remedy for this problem? That we should dramatically increase spending on our schools, especially on the worst ones.

We have — and it hasn't worked:

- Overall, per-pupil spending in the United States, adjusted for inflation, has doubled between 1966 and 1990 — with no demonstrable improvement (and many signs of decline) in the quality of education provided.
- In the Boston school system, combined SAT scores are 283 points lower than in nearby Lexington, Mass., even though Boston spends $1,600 more per pupil than Lexington does.
- In Washington, D.C. schools, whose degraded condition Kozol holds up for shame, eighth-graders ranked 39th out of 40 states and territories in a recent nationwide math test — yet the city's per-pupil spending was the highest among the jurisdictions surveyed.

In short, there is no guarantee that even doubling or tripling the amount of money spent on the deteriorating, violence-ridden schools of the inner city would turn these educational wastelands into academic oases. If we want the most disadvantaged children to be able to attend good schools, there's a much more direct solution: Let them *go* to the good schools.

This is exactly what education choice plans would do. By allowing poor children (and all other children) to attend whatever school in the metropolitan area they choose, these plans would do more than we've ever done to assure equal educational opportunity for all children.

continued

HE ESCALANTE
IATH PROGRAM

e's not just teaching calculus anymore. Now, he's teaching eachers.

me Escalante. Surely, math instructor in ountry has heard of this an immigrant who d an impoverished, ominantly Hispanic East ngeles high school into onal math powerhouse. bly most have seen the O-funded film "Stand Deliver," which chroni- is teaching revolution at eld High. And many no t have read *Washington* eporter Jay Mathews' book *Escalante: The Best er in America* (a label nte modestly denies). t amid the awe and, times, envy surrounding ell-documented facts calante's accomplish- s — a quarter of the n's Hispanic students pass the advanced-place- calculus exam, for in- . come from his school ny educators seem to forgotten the most tant lesson of Escalante's ph: *how it happened.* calante says he laughs people suggest his ss is largely a product s own, imposing person- And he's right. If the tiveness of the Escalante Program depended on resence of its founder, nte would be a mere sity — at best one of a sand "points of light" — more use to aspiring teachers than Madonna aspiring music stars. t the Escalante Math am works because it's d in old-fashioned common sense — something that can be transferred to *any* classroom. That so many educators don't see this, Escalante asserts, "just shows how far away we have drifted from the fundamentals of teaching."

TEACHING THE TEACHERS

Escalante, who recently left Garfield High for the challenge of a new, equally impoverished high school in Sacramento, Calif., is working to turn this trend around. Since gaining national prominence, he's founded a teacher-training center at East Los Angeles College; produced a public-television video series, called "Futures," designed to excite teachers and students about math; and is planning a "video textbook" of some of his calculus lectures.

But perhaps his most important contribution to the teaching profession is an article he wrote in the Spring 1990 issue of Howard University's *Journal of Negro Education*. There, Escalante for the first time detailed the ingredients of his success.

The article should be required reading for all math teachers.

The most basic factor in helping young people learn math, Escalante says, is having faith in one's students: "My sole criterion for acceptance into the program is that the student . . . sincerely wants to learn math." From there, it's up to the teacher to bring each student's desire to life. "If we expect kids to be losers, they will be losers," he contends. "If we expect them to be winners, they will be winners."

But students have an equal obligation: They must *work* to succeed. By now, the contract Escalante requires each of his students and their parents to sign is well-known. Among other things, the contract binds students to completing extensive, nightly homework assignments; attending study sessions after school and on Saturdays; and enrolling in Escalante's summer math program.

More important than the specifics, though, is the principle behind them: "hard work, and lots of it, for teacher and student alike." Escalante demands "practice, practice, and more practice" from his charges. The net result, he explains, is the young people in his classes "spend more time being exposed to and doing math than most other high school students do" — and the effect of that exposure shows up in a nearly unparalleled performance on the calculus exams.

IT COMES DOWN TO LOVE

Other elements of Escalante's program are important as well. He promotes a football-like team spirit, cooperative learning, contacts with successful former students, close parental involvement, and a good-humored mode of instruction that's as much fun as it is serious. He also fills his teaching "with lively examples, ingenious demonstrations of math at work, and lots of linkages between math principles and their real-world applications."

But in the end, he believes, it all comes down to love. "I exhibit deep love and caring for my students" — and that means more than being a sounding board for their concerns. "It also means that I must be willing to repeat an idea, concept, or term as many times as needed for students to understand it. I have to make sure that every kid is listening to me and watching me when I teach," he says, "so that they do not miss a thing." ■

RISE TO THE

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FIGHTING FOR OUR FUTURE

Some don't see it this way. To the most vocal proponents of the current educational regime, choice is a *threat* to the schooling of the poor. Given the opportunity that choice would afford them, these critics insist, students and their parents would abandon the poorest-quality public schools *en masse*, leaving these schools no choice but to close.

That's just as it should be. Schools that cannot produce high levels of achievement should not be in business. We need to ensure that every poor child has ready access to a free elementary- and secondary-school education, and choice plans do that. But we should never consign students, of any race or socioeconomic status, to a bad school just for the sake of preserving the school.

More likely, confronted with the sudden competitive pressures to improve or face extinction, poor-performing school systems would begin to revolutionize themselves, for the benefit of *all* their students. This is just what has happened in New York City's Harlem Community School District No. 4, which offers open enrollment in any junior high school and a number of elementary schools in the district. Listen to this review from the nonpartisan National Commission on Children: "The combined effects of school choice, a comprehensive and interactive curriculum tailored to students' needs, and increased teacher automony [in District No. 4] have dramatically improved the performance of the districts' students."

If this kind of improvement can happen in Harlem, one of the nation's most economically deprived neighborhoods, it can happen everywhere.

And choice can make sure it does.

TEACHING SCIENCE AND MATH

We come finally to science and mathematics instruction. The delay in addressing this subject was intentional: To be effective, the reform of science and math instruction must begin with the reform of education. New curricula, new teaching techniques, and better-trained teachers may boost the science and math performance of children who are already the most academically able. But absent adequate preschool preparation and high-quality schools, these steps will do little to reverse declines in achievement among students who are furthest behind.

That said, a revolution in the way we teach these subjects is urgently needed if this nation is to be first in the world in science and mathematics achievement by the year 2000. Today, science and math are not being taught to world-class standards. They must be if our schools are to produce world-class students.

This requirement applies from the moment children first encounter science and mathematics. Math, in particular, is now being presented to kindergarten and the early-elementary students in such a way as to silence rather than engage their natural curiosity, and to confuse more than enlighten them. One of the main reasons for this, of course, is that the teachers themselves often don't know what they're teaching; sadly, at the time when children's need for help in understanding math is its most intense, their teachers have the least academic training in the subject.

Ultimately, correcting this problem will require that science and math teachers — in the early-elementary years as well as later — be much better educated in these fields, a change that will require both sharply higher teaching-certification standards and expanded in-service training. But we cannot wait for these long-term improvements to take effect before we start teaching math to children in the right way. The National Science Foundation's Project IMPACT (see box) has proven that it is possible to train early-elementary math teachers in a timely, effective, and cost-efficient fashion — and to upgrade beginning math instruction in the process. We should extend this program to all school districts at the earliest practical moment.

In the later grades, the needs are similar: higher-quality textbooks; more engaging teaching methods; and better-trained teachers. But the key to successful reform at these grade levels is a completely reconfigured curriculum — and, fortunately, the road map for such a change is already in place.

In science, the National Science Teachers Association has developed a course of study for the seventh through 12th grades that is now being tested in California, Texas, and four other jurisdictions. The curriculum adopts the European-style "layer cake" approach: Rather than taking a smattering of disconnected, full-year science courses, children in the new curriculum would study key aspects of each of four sciences (biology, chem-

physics, and Earth science) every
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LLENGING STUDENTS EARN

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ucation journalist Thomas Toch
us one answer in his disturbing
book, *In The Name of Excellence*,
with the increase in advanced academic programs in many states," he writes, "tremendous numbers of students are being permitted to satisfy new graduation requirements in a host of insipid courses that are appearing where requirements have been raised. [These] watered-down courses typically teach students only the most rudimentary aspects of the academic disciplines."

In Florida, for example, high school students can fulfill their four-year science requirement without having to take a single course in biology, chemistry, or physics; in the high school "general math" sequence, they study nothing but arithmetic for four years. The same is true in Arkansas, whose course-taking requirements are nominally among the toughest in the nation. In Pennsylvania, students receive math credits for taking metal shop.

Toch places much of the blame for gutting these new graduation requirements on educators themselves. In his tour of 60 schools, he found that most public educators continue to "reject the notion that non-college-bound students need to study academic subjects in more than a superficial way."

> *"If we keep doing what we've been doing in education, we're going to keep getting what we've already got."*
>
> **Thomas King**
> Project Director, Saturn School of Tomorrow Project

Whomever is to blame, the implications of this intellectual sabotage are clear: New science and math curricula will be useless unless they are implemented and enforced. If we want all students to learn science and math, they must *study* science and math, not metal shop and arithmetic.

This same principle applies inside the classroom. Grade inflation, surface-skimming lectures, and minimal homework are fast becoming the rule in the nation's schools, particularly in the inner cities. As one North Carolina science teacher explained to Tom Toch, in extolling a new science course for disadvantaged students: "It's easy enough, so [students can] feel good about themselves."

Unfortunately, knowledge and skills — not "feeling good about oneself" — propel young people into college, well-paying jobs, and rewarding careers. Pretending otherwise, and refusing to demand top-level performance from *every* student, not only cheats kids out of an education, it cheats them out of life — and all the more so for poor and minority students. Accepting disadvantage as an excuse for failure, says math teacher *extraordinaire* Jaime Escalante, can be a "death blow" to these students' dignity and their drive for success.

Escalante should know. He proved that with practice, hard work, and homework — "lots of it" — economically disadvantaged youngsters could conquer even the most difficult high school subject, advanced-placement calculus. Escalante summarizes this accomplishment in a simple equation: "Determination + Hard Work + Discipline = The Way to Success."

There's a lesson here. Children can't learn unless they study — and most won't study unless their teachers and schools demand it of them. On the other hand, if teachers do assign lots of homework, give tough exams, and flunk students who don't perform — and administrators and parents support them in these steps — children will learn very quickly that studying and achievement are important commodities — more important,

they may find, than the long hours they now spend before the television.

TELLING SCHOOLS WHAT BUSINESS NEEDS

Business can help schools in promoting rigorous and disciplined study as well by making it plain that they expect their young job applicants to be well versed in science and math, and that they will hire and pay on this basis.

Most companies aren't doing much along these lines now. A 1987 employment survey by the National Federation of Independent Business found that only 14% of member firms asked to see young people's high school transcripts, and a minuscule 3% looked at achievement-test scores. As a result, says Cornell University economist John Bishop, high school grades and performance on achievement tests — in science, math, or otherwise — have essentially no effect on students' wages or their probability of finding a job once they start looking for work.

Is it any wonder many students don't study any harder than they do?

To remedy this problem, a group of several hundred U.S. companies, under the leadership of the American Business Conference and the National Alliance of Business, has begun work on a new standardized test for high school graduates that would measure a variety of work-related skills, including science and math achievement, problem-solving, and other thinking skills.

Clearly, these organizations should proceed with their testing initiative as expeditiously as possible. There is perhaps no more vivid nor more effective way for business to send a message t schools about what students will nee to know for the jobs of the future.

FINDING THE MONEY

Business can help schools and studen in another critical way: beginning to build the consensus for the "necessar revolution" in federal spending.

The recommendations presented above, particularly the preschool age da, will be expensive. And so they w remain recommendations unless we aside the money needed to implemer them. It does no good to declare, as education reformers often do, that "v must spend whatever it takes." If suc programs are merely added atop the current federal budget, they will not adequately funded, no matter how vital the cause might be. Current bu

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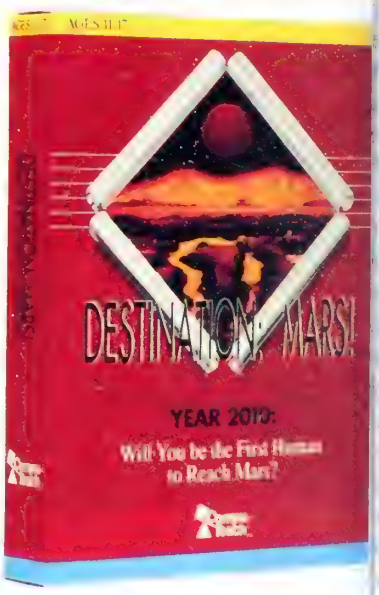

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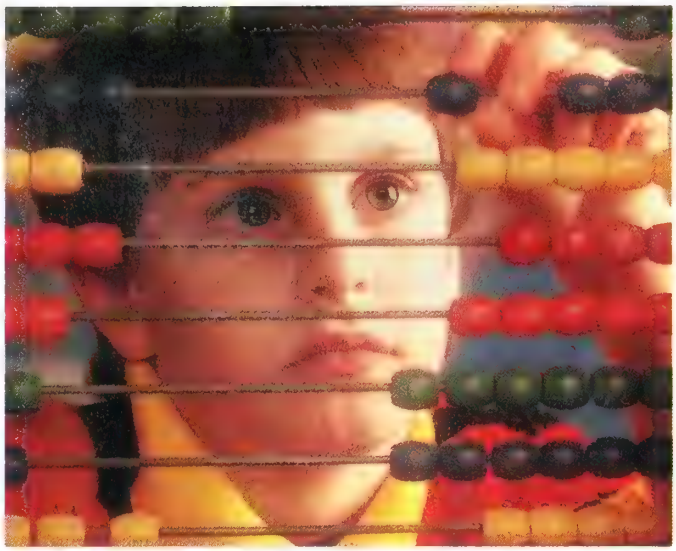
ently paid to insure these countries
st outside attack at a time when
were too militarily and economical-
ly immature to defend themselves. Now that they have grown both more mature and secure, it is time we looked inward, to our children — most of whom have no possible way of defending themselves without our help. They need us far more than the economies of Western Europe and South Korea do.



THE STOCK MARKET

Can America's children conquer the scientific and mathematical challenges of the future with the intellectual tools of the past?

A TIME FOR REVOLUTION

"The general solutions to our problems [in science and math education] are obvious and have been for years," declares John Moore, a professor emeritus of biology at the University of California at Riverside and a man who has been engaged in science-education reform efforts for years. "We know what needs to be done," he says, "but so far there is a pervasive unwillingness to make the necessary changes."

These are discomforting, but necessary, words: We know what needs to be done, but we haven't been doing it.

Indeed, nothing on these pages should come as any surprise to business leaders or educators who have spent the last several years trying to understand why U.S. students, who begin life with the same basic intellectual bequest as do other children around the world, nevertheless perform so much more poorly on scientific, mathematical, and other intellectual tasks as they progress through school. Perhaps the only surprise should be, given the problem's increasingly dire implications, that we have done so little to correct it.

Professor Moore entitles his article, "Educational Reform? Are We Serious? No, But We Had Better Be." That's a worthy injunction for our age. If we are truly concerned about this country's dismal science and math performance, then let's get serious and do something about it. The time has long since passed for demonstration projects, "adopt-a-school programs," business-education "partnerships," and "schools that work" documentaries. We need a dramatic, systemwide remaking of our educational enterprise, and we need it now.

The time has come for the "necessary revolution" in science and mathematics education.

If we pursue this course with honesty and determination, our future will be assured. The United States *will be* number one again in science and math. You can count on it.

And if not? The outcome is equally certain. Francis Keppel states it most succinctly. "The teacher and the classroom," he explains, "are . . . means to an end, and not the end in itself. The end of education is learning." If teaching does not achieve that result, he says, "it is futile."

Those are our options: a real future, or futility.

Could there be any clearer choice than this? ■

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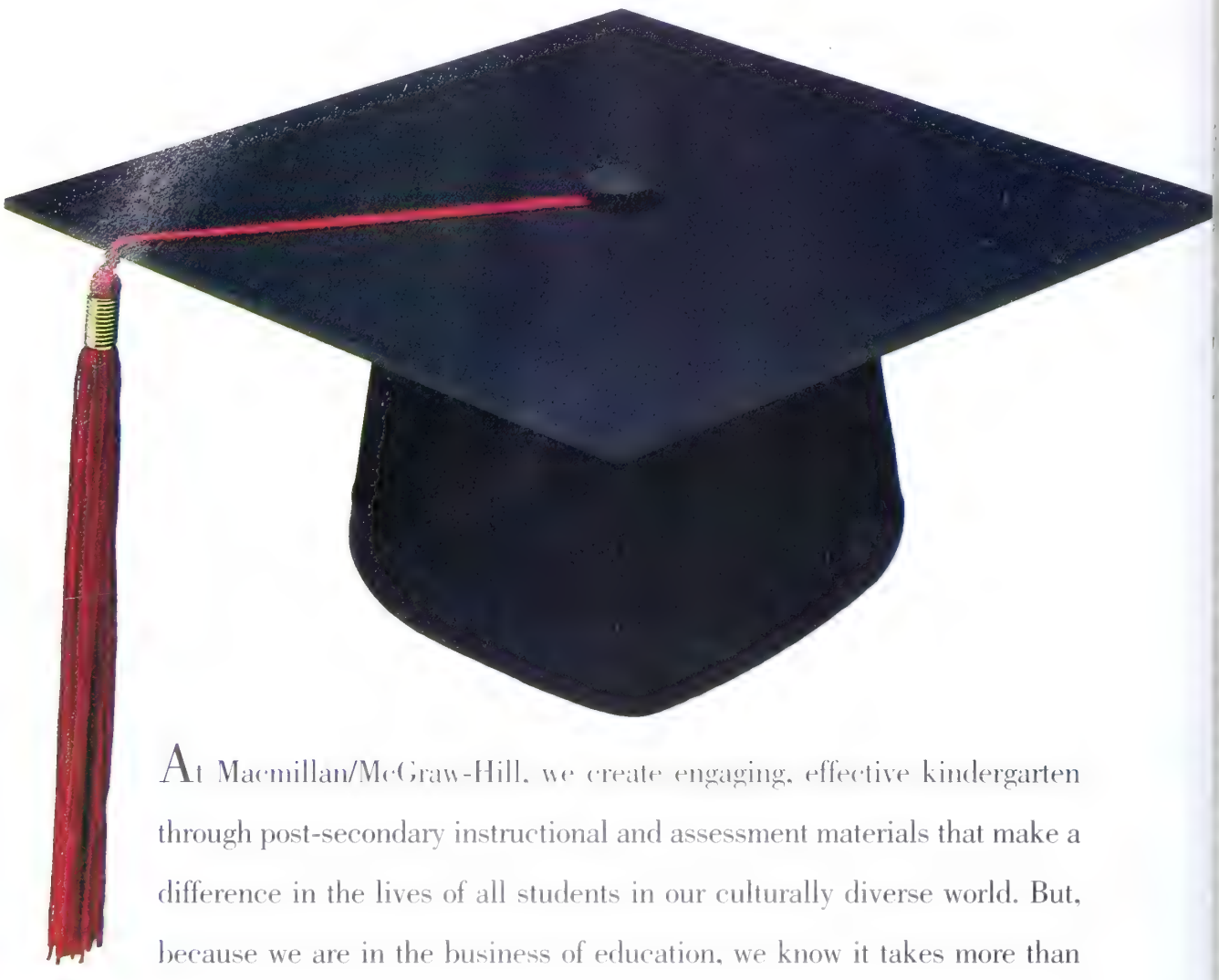

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ET'S CHECK OUR "BAGGAGE" T THE CHOOL DOOR

Joseph L. Dionne

tudents across our country are carrying more than books to school these days; they so carrying our society's ctive inability to resolve amental questions about and how they should In this sense, students failing; we are.

eryone has an opinion t what is wrong with ation in America. What en overlooked is that opinions issue from arrow self-interest of takeholder group to n one belongs. Although ntentioned, virtually educational interest brings its own "bag- to the discussion about the schools' priorities d be.

hat sort of baggage does interest group carry? look at a few of the stakeholder groups, be- ng with my own.

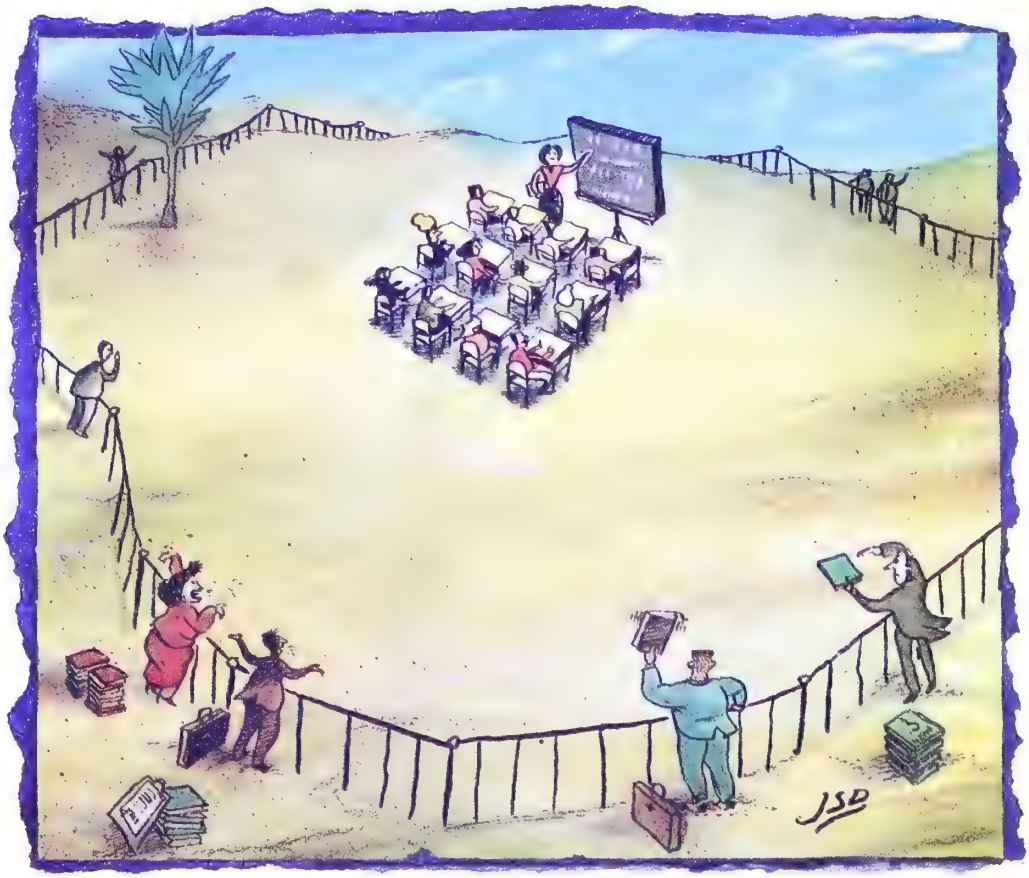
siness people carry the ge of economic deter- sm, which leads to the that the "bottom line" ucation is the creation olid work force that n turn, permit American panies to be globally petitive.

hools have the equally rtant goals of creating tive citizens capable of nterested in participating in a democracy, and contributing to the quality of life by exposing them to the arts.

Educators — teachers and their supervisors — bear the baggage of wanting to preserve the status quo on the issues of compensation and working conditions. Today we are paying teachers more, and that's good. They are professionals and should be treated as such. But the flip side of greater professionalism must be increased accountability and flexibility. The 8:40-to-3:00 day and 180-day school year are not etched in stone. With Europeans sending children to school 210 days a year and the Japanese, 240 days a year, can we avoid making a similar adjustment in our basic study time?

The baggage of *academicians* is an obsessive devotion to subject matter as the key to successful schooling. Over the last 25 years, the teaching certification standards in most states have increasingly emphasized mastering subjects, *not* learning and teaching methods. While few would argue that knowledge of a subject is essential to being a good teacher, it is also true that scholasticism is no substitute for being able to communicate with students and help them learn. As every teacher knows, students acquire knowledge in different ways and at different paces. Yet for decades, we have been training teachers to overlook that simple fact of life.

Politicians have perhaps the most difficult task of all of the stakeholder groups, balancing the competing needs of those interested in education and those who in the end have to pay for it. But politicians bring the most obvious baggage to the table: Their first obligation is to get re-elected. They will always have one eye on the polls and public opinion.



JOHN S. DYKES

And public opinion over education ways and means is at its most fractious point in decades. Everyone agrees they want better schools; few agree on how to get there.

Local school boards must not be overlooked. From school colors to school curricula, the 18,000 school boards are crucial players in deciding the parameters under which the institutions in their districts will operate. The problem is that the boards have both glorified and diminished their function. The boards exist to further the education of students in their districts — period. Many school boards go beyond that simple function and get mired in any number of tangential issues.

Finally, *parents* bring the heaviest baggage to the education discussion; While they want their children to learn, they too often are passive observers content to leave the difficult task of education to others.

"Net-net," as we say in business, virtually all the stakeholder groups involved in education are at odds on virtually all the salient issues. America spends more per student than any other industrialized power but has the least to show for it. While the picture has been over-dramatized, it is true that too many of today's graduates don't read, write, or speak adequately for the demands of today's society; do not have a grasp of the form of government they will ultimately participate in; and will not be able to compete successfully with their counterparts from other countries.

What's to be done? My hope is that all the major stakeholder groups will come together, check their individual sets of "baggage" at the door, and try to work out a grand plan for the future of education in America. Let's get business people, for once, to remember that the school has other responsibilities beside producing workers. Let's have teachers be more flexible about the length of the school day and year. Let's urge academicians to open their minds to the notion of pure teaching and classroom skills as worthy pursuits. Let's convince politicians to avoid vetoing an idea because it's not "politically viable." Let's ask school boards to clear their agenda of all noneducational issues. And let's get parents to abandon their passivity and jump into the responsibilities of ensuring better schools.

America spends more per student than any other industrialized power but has the least to show for it.

Finding the right mix of answers to tough questions will be a daunting task. But the alternative is unacceptable. We cannot continue wandering in the dark, trying this theory and that, while thrusting ill-prepared students into an increasingly competitive world.

The foundation of any free society is an educated, enlightened populace. nothing else, for the survival and well-being of our society, we must answer these educational questions *now.*

I'm ready to check my baggage. Are you? ■

Joseph L. Dionne is chairman and chief executive officer of McGraw-Hill, Inc. This article is adapted from remarks made before the First Business Roundtab Annual Education Meeting

THE MOUTHS THAT ROAR

They're contentious and contagious. They're The McLaughlin Group. (Clockwise from left) Jack Germond, Eleanor Clift, John McLaughlin, Fred Barnes, Morton Kondracke, and Pat Buchanan.
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NVIRONMENTAL DUCATION: CIENCE N REAL LIFE

Allen L. Hammond

isn't your typical class-oom assignment. Students slog through iverside bogs, venture n boats, even take water les near sewer outfalls. analyze the samples, swap data over a com- network with stu- from dozens of other ls, mapping pollution throughout an entire rshed. A new form of k-study"? Hardly. These a thousand similar pro- are part of one of the st new topics in the n's schools—environ- al education.

GREEN NETWORK

students and their terparts around the d are members of the al Rivers Environ- al Education Network EEN), which has head- ters in the University ichigan's school of ral resources. The pro- 's hands-on nature, the ce to deal with environ- al problems, and the ng of data with students her schools or countries et the kids really excited," he University of Mich- Mare Cromwell. "We ve it stimulates interest ence."

nfortunately, few high ol textbooks to date rporate more than a smattering of environmental topics. Specific environmental curricula themselves are still rare. But things are changing. A number of innovative environmental-education programs exist, and the field is gathering momentum.

Wisconsin has taken the lead by mandating environmental education in its curriculum for both elementary and secondary schools. Florida and Maryland also have adopted some curriculum guidelines, and a number of other states are also moving in this direction.

National guidelines are coming as well. A new federal policy incorporated into the National Environmental Education Act, signed into law by President Bush last year, commits the U.S. Environmental Protection Agency (EPA) to establishing a program of education on the environment, including development of curriculum guidelines and teacher training.

Science educators increasingly see environmental topics as a good way to promote interest in science and mathematics. More than half of U.S. science teachers use at least some environmental-education materials in their classrooms.

"Environmental education is coming of age," says Thomas Marcinkowski of Maryville College in St. Louis, a prominent education researcher and a leader in the drive for environmental literacy. "Environmental issues provide a meaningful contemporary context for science teaching and learning," he contends, arguing that they help to take science beyond disciplinary bounds, out of the classroom and into everyday life.

AN ALLIANCE FOR EDUCATION

Business is already heavily involved in environmental education and the promotion of environmental literacy. "We see a groundswell of interest in every sector of the economy," says Tom Benjamin, staff director of the Alliance for Environmental Education in Washington, D.C. The Alliance includes more than 240 member organizations from business, government, and education, and is growing by about 10 organizations a month. The Alliance's activities include a nationwide network of 100 environmental-education centers, and several Alliance members in California are developing a new environmental-education curriculum for elementary schools, called "Think Earth."

Business-led efforts like these prove that environmental education *is* far more than a fad. "Interest in environmental issues is here to stay," Tom Marcinkowski asserts, "and so is environmental education." ■

Dr. Allen L. Hammond is editor-in-chief of the "1992 Information Please Environmental Almanac" and director, Program in Resource and Environmental Information for the World Resources Institute, Washington, D.C.

PHOTOS COURTESY OF GREEN

Students in Ann Arbor, Michigan, monitor river water quality as part of the Global Rivers Environmental Education Project (GREEN).

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THE BUSINESS OF BUSINESS IS ALSO EDUCATION

By David T. Kearns
U.S. Deputy Secretary of Education

As America prepares to enter a new century, we find our education system in sad shape. Yet education is the key to America's future competitiveness, to a strong economy, to our national security, and to preserving our system of democracy. Education is the fundamental solution to many of our nation's social ills. I believe businesses of all sizes have an important role to play in improving education and making U.S. students and workers first in the world in mathematics and science achievement.

While pedagogy should be left to schools and educators, business can help support the process that will move local communities, and then the nation, toward truly revolutionary reform. Business can assist educators in setting the world-class standards that will be necessary for the students of today to be able to compete in the world of tomorrow. And business can support retraining of teachers and administrators that will enable them to teach to those standards.

The problem today is not that students know less than they did a few years ago. The results of a recent test by the National Assessment of Educational Programs found that today's students know about what students in 1970 knew. The problem is that students know so much less than they need to know to live and work in today's world. In short, as the world changes through greater advances in technology, the gap between what we know and what we need to know grows.

Business can help set world-class standards so today's students can compete in tomorrow's world.

President Bush and the nation's governors have set six national education goals for the country to strive to achieve by the year 2000: All children should enter school ready to learn; we should graduate at least 90% of our students from high school; students should leave the fourth, eighth, and 12th grades having demonstrated competence in challenging subject matter in English, math, science, history, and geography; U.S. students should be literate and prepared to be good citizens and productive workers; U.S. students should be first in the world in math and science; and all schools should be safe and drug-free.

AMERICA 2000 is the president's education reform strategy for achieving those national goals. It is a four-track, community-based, bipartisan plan for change. On the first track leading to improved schools that are more accountable for t results they achieve — business can work with educators to help set the standards of learning that are necessary for wor class competition. It can then push its own community's schools to adopt these standards and administer one of the upcoming national tests that will measure schools' progress.

Teacher training is an essential aspect of improving today's schools. For example, the business community in Chicago is supporting the National Science Academy, a teac er retraining project under the leadership of Director Jon Thompson. It is an excellent example of private support for innovations and improvements in teaching skills. It also exem plifies the Chicago business community's reform strategy of supporting educational change and improvements without telling educators how to teach. Business leaders in Chicago also support legislative efforts for statewide education reform In addition, various companies are loaning executives to schools to help them improve their day-to-day management. For example, Continental Bank executives are working hand in-hand every day with educators at Orr High School.

Business also has a major role in the second part of AMERICA 2000, creating a new generation of U.S. schools for tomorrow's students. These schools will break the mold by starting from scratch. The New American Schools Development Corp., a nonprofit foundation, is seeking to raise $200 million to fund developme by a handful of design teams. These teams will work with communities to develop unique New American Schoo that best meet local needs. Business lea ers should serve on each committee of community leaders to plan the new schools. In addition, businesses of all sizes can make a contribution to the New American Schools Development Corp. While this contribution should not come at the expense of a business's existing efforts in the community, a co tribution will go a long way toward helping reform all schools in America. It is the best way to leverage the most out of a single investment in education. (The foundation can be reached at 703-908-9500.)

Some schools are already taking risks and reinventing themselves. At Daniel Webster Elementary School in San Francisco, principal Willie Santa Maria is using an accelerated learning program. What is different about this progra is that it is not for gifted students but rather for those wh need extra help. The local business community has played

JOHN S. DYKES

gral role in supporting her innovations. Businesses all America should be supportive of such teachers and als who are willing to take risks and promote pro- like this one that challenge all students, instead of just t few.

e third part of AMERICA 2000 focuses on lifelong g and retraining of our work force. Businesses can ommunities set up skills clinics that diagnose what worker needs to learn for a particular job and then hat worker to a place where he or she can learn kills. All Americans need to improve their skills, and sses should see to it that their own employees are retrained and have the skills they need to excel in bal marketplace.

e fourth part of the initiative seeks to transform com- es into AMERICA 2000 communities — places where g can thrive. Businesses can work toward this goal by cing their own communities to 1) adopt the national ion goals; 2) develop a community-wide strategy for plishing the goals; 3) devise a report card for measur- ogress; and 4) agree to create and support at least one new generation of schools. Business must be a part of mmunity strategy to ensure that high international rds are set and that real incentives for teachers and ts are built into the restructured system. The business community must push hard for revolutionary reform, for systemic change cannot be imposed by Washington: It must happen at the community level.

Business can help bring about this reform by becoming involved in the political process. It can back the real reforms that come before the legislature and the local school board. It can support educators and politicians who are calling for real change and doing something about it. Businesses of all sizes should urge all their employees to become mentors to local students. All of us who have obtained some success in our lives should help a youngster trying to make it. Giving that helping hand is an underpinning to improving not only our educational system but also our society.

The goal to become first in the world in math and science achievement is ambitious, but business can help make it a reality. President Bush has challenged every community to become an AMERICA 2000 Community. I want to challenge every business and every businessman and woman to join the struggle to improve education in their community. America's competitiveness — and the future of our children — is at stake. ■

David T. Kearns is the U.S. Deputy Secretary of Education. He is the former chairman of Xerox and coauthor of "Winning the Brain Race"

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ABOUT THE AUTHOR

"Fighting for our Future" was written by **Kevin R. Hopkins,** author of *Help Wanted: How Companies Can Survive and Thrive in the Coming Worker Shortage* (McGraw-Hill, Inc., 1990) and *Business Week's* recent special advertising section "Willing & Able: Americans with Disabilities in the New Work Force" (October 28, 1991).

Mr. Hopkins, a senior fellow with Hudson Institute, was a specialist in mathematics at William Jewell College, the University of Missouri, and UCLA in the mid-1970s. He was special assistant to the President for policy development in the Reagan White House from 1981 to 1984, and served as senior consultant to the President's science adviser from 1985 to 1987. He is also the author of "Another Country: Poverty in the United States" (forthcoming), a study funded by the Jeld-Wen Foundation of Klamath Falls, Ore., and Cato Institute (Washington, D.C.), on which parts of this special advertising section are based.

Susan L. Nestleroth, a labor-market analyst and Mr. Hopkins' co-author on *Help Wanted* and "Willing and Able," served as research coordinator for "Fighting for Our Future." Julia Chlopecki and Mary Anderson also provided invaluable research support.

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The latest word on why it appears the hare can never out-run the tortoise. —p.266

The Washington Post says:
"If you've ever wanted to recapture that sense of near-mystical rapture [that crowned your first mathematical proof], there is no better place than this book, and no more humane and enthusiastic mentor than Dr. Paulos...His principal genius lies in the recognition that many humans 'have been thinking math all their lives without knowing it.' For those, for anyone who ever sat rapt at the austere beauty of a proof and later wondered where the wonder went, it's here."
—CURT SUPLEE

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No issue is more vital to the competitiveness of American business than the education this nation provides its young people, and no aspect of their education is more critical than the quality of science and mathematics instruction they receive.

We live at the threshold of an age in which sophisticated mathematical thinking skills will be required of every worker and citizen, not just a privileged few. From saving the environment to exploring space to simply building a better mousetrap, our survival as a people may depend on how well we meet this challenge over the decade ahead.

But we cannot do it with the education system we have now. As "Fighting for Our Future" makes clear, genuine scientific and mathematical literacy for all Americans demands a complete rethinking of the way we care for and teach our children. Just doing things "a little bit better" won't be good enough. Only a true revolution in education will do.

We salute our distinguished advertisers who have joined with Business Week to define and encourage continued steps down this path.

John W. Patten
Publisher, Business Week

BY ANDREA ROTHMAN

RY RODAS: I WAS A TEENAGE NDMAKER

As a vice-president of Catco Inc., a $70 million toy company, Mary Rodas enjoys living it up. Her annual compensation is worth $200,000, and she takes business trips to Japan and Europe. Rodas also hires a black stretch limo to take her to work. She needs a chauffeur—she's too young to drive.

The 15-year-old's job isn't child's play. Rodas advises New York-based Catco on marketing and design strategies for the many toys it makes. Proj- nclude stuffed Little Mermaid dolls and a new collection obage Patch Kids, slated for release by Christmas.

as traces her career to age 4, when she criticized her oor, Catco owner Donald Spector, for laying his kitchen vrong. Soon, Spector began using Mary as a sounding Last year, Rodas helped develop the Balzac Balloon cloth balloon cover that rang up $30 million in sales in st year. A student at the Professional Children's School nhattan, Rodas works afternoons, 15 hours a week.

nurses grander plans. One day, Rodas hopes to go to rd University and then launch a career in politics. "Poli- today talk too much," she says. "I want to help in g things the way they should be run." This is one 15- ld with plenty of experience doing that already.

By Sunita Wadekar Bhargava in New York

ANNA FODOR: BUILDING ITALIST BRIDGES TO HUNGARY

sitors to Susanna S. Fodor's office might they had stumbled a construction engi- room. Hard hats of color line the walls—real estate trophies," ays. Fodor has spent etter part of 19 years lawyer handling real e and construction acts. Lately, she has ned those skills with acquired in child- -speaking Hungar- o recast her career v firm Jones, Day, Reavis & Pogue. Fodor is an East pean specialist pursuing deals in the country of her birth. v in her early 40s, Fodor came to the U. S. at age 13, she and her family left a pampered existence in Hunga- seek political asylum. Law wasn't her original choice. But lengthy arguments with her father, Fodor was persuaded to put aside her first love, psychology. In 1972, with a law degree from the University of Wisconsin, she won her first job, as an environmental lawyer at the New York office of the U. S. Environmental Protection Agency.

Sensing that real estate offered even bigger opportunities, Fodor decided to switch specialties and took a job as in-house counsel at the Urban Development Corp. in 1975. Two years later, she left to join a private firm. After several additional moves, she joined Jones Day as a partner in 1989.

In her current role, Fodor functions as dealmaker and handholder for U. S. companies investing in Hungary. One of her more recent cases was the $8 million acquisition of the renowned Budapest restaurant, Gundel's, by New York restaurateur George Lang and cosmetics heir Ronald S. Lauder.

Between Eastern European transactions and meeting the demands of her 2-year-old daughter, Fodor says she has little time for much else. But she remains ready for anything. "Who knows? I might give all this up and move to Vermont and open a ski resort," she says.

S. W. B.

RICHARD NANULA: WHEN YOU WISH UPON A BALANCE SHEET

Think the only magic at Walt Disney Co. happens at theme parks? Consider Richard D. Nanula. Six years ago, he was one of five Harvard MBA students doing feasibility studies for a new Disney theme park. Now 31, Nanula is chief financial officer of the $6 billion-a-year company and one of the country's youngest CFOs.

Nanula's study, assessing the feasibility of a theme park on American factories, has been shelved for now. But since Disney's then-CFO Gary L. Wilson handpicked him in 1986, he has risen fast. In 1987, he helped Wilson swing a deal to buy the Disneyland Hotel from Wrather Corp. and another to buy a mail-order firm for kids' furniture. One early contribution came from an old Harvard tie: He contacted a former classmate now at JMB Realty Corp., who helped broker JMB's $404 million purchase of Disney's Arvida land-development concern.

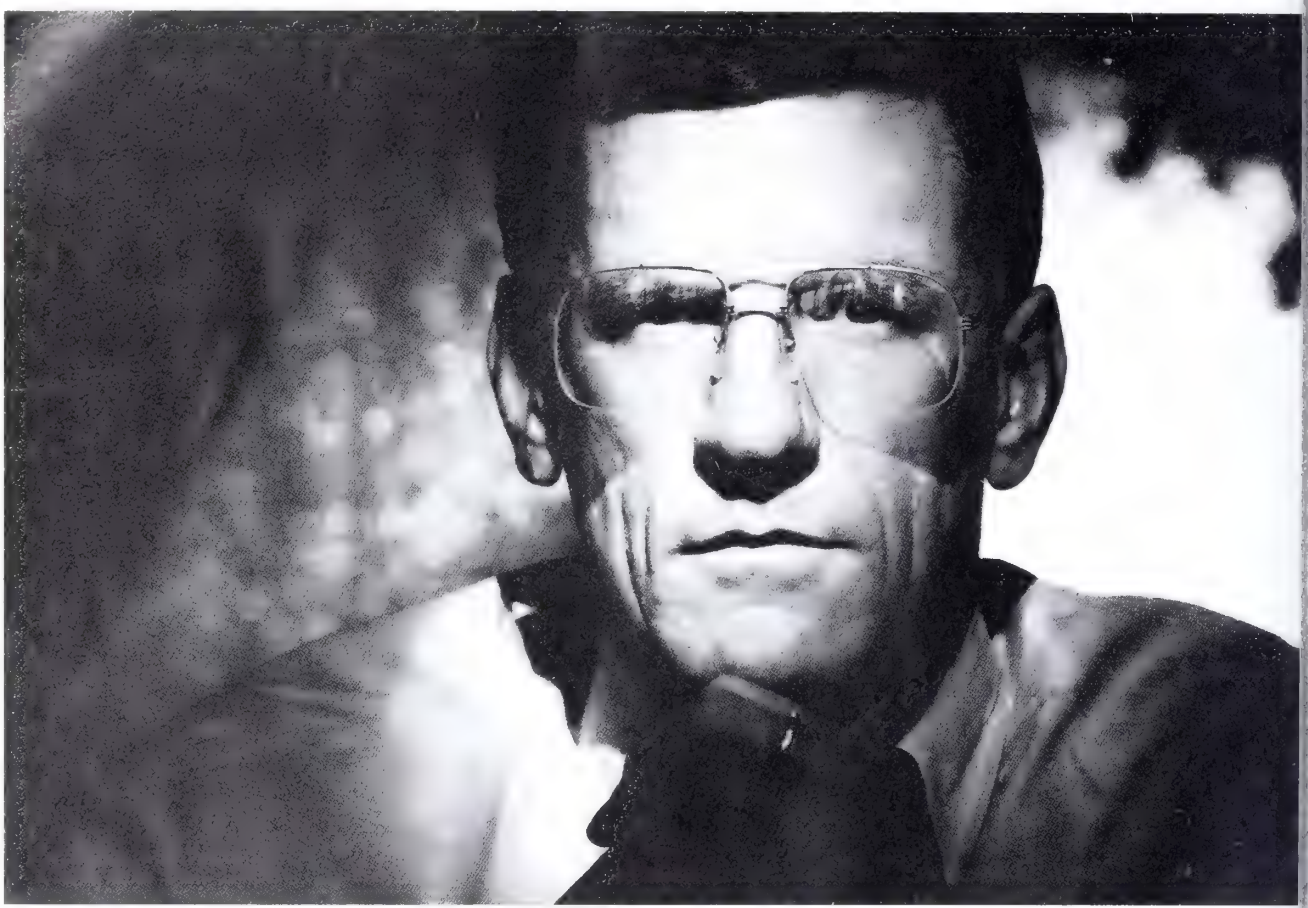
After Wilson left in 1989 to buy Northwest Airlines Inc., Nanula moved up to treasurer. In that job, he helped raise $600 million for Disney films with Japanese investors and $965 million with bonds backed by Disney's soon-to-open Euro Disneyland in Paris. His negotiated deal to buy the Muppets TV characters fell apart after founder Jim Henson's 1990 death.

In his free time, Nanula, a bachelor, is a regular at Los Angeles Lakers games. "I don't like missing them," he says. But sometimes his busy work schedule gets in the way. Following Disney's recent trend toward innovative schemes for raising money, the company will soon offer $250 million in bonds to finance television production. The bonds' return increases if the shows are hits. Next year, Disney will need money for future films, and soon after that it will need cash for a promised new theme park in Orlando or Anaheim—all opportunities for Nanula to test his imagination.

By Ronald Grover in Burbank, Calif.

TOUGH TIMES, TOUGH BOSSES

CORPORATE AMERICA CALLS IN A NEW, COLD-EYED BREED OF CEO



MICHAEL WALSH | *Tenneco*

Coming in with a reputation as a cost-cutter, Walsh wasted no time slashing 8,000 jobs. But he still has to figure out the best business mix for the conglomerate

It wasn't exactly the graceful exit Tenneco Chairman James L. Ketelsen had in mind. In early August, Tenneco Inc.'s board gathered at Manhattan's Helmsley Park Lane Hotel to choose an eventual successor for Ketelsen, who had every intention of grooming his protégé for a couple of years before heading off into retirement. After a months-long star search, Ketelsen thought he had finally found his man: Michael H. Walsh, the laser-sharp CEO of Union Pacific Corp.'s railroad subsidiary.

By the late summer board meeting, however, Tenneco's directors had other plans. During the gathering, Ketelsen was asked to leave the room for a while. When he returned, it was clear that the board had decided to offer Walsh immediate control of the Houston-based conglomerate, after he made it clear e wasn't interested in the No. 2 job. It w a stunning development. After all, 60-year-old Ketelsen seemed in full co mand of the conglomerate he had he ed for 13 years.

But with the recession creaming Te neco's 1991 results after years of erra earnings, the board decided it was ti to push aside the proud chief. "Wa

vith a clean perspective," explains ector. "He wasn't weighed down politics of the past." Apparently alsh, who is now president and ıp the CEO title in January, has unveiled a $2 billion restructur-ın, cut the dividend by 50%, and ɔut 8,000 jobs.

ONAL TIES.' Similar scenes of ɔom intrigue have been played is year at such rofile companies mpaq, Goodyear, llied-Signal. As ɔuttering U. S. ıy continues to corporate profits tailspin, many di- are casting a eye on the occu- f the corner of- nd at companies battered balance or sagging sales a grueling peri- belt-tightening structuring, some are skittish taking a busi--usual approach. ously, the person elped create the von't easily take dea of selling off ed assets, shut- plants, or throw- usands of people o the streets. "In cases, the emo- ties of the career are just too " says Ferdinand rny, vice-chair- f Russell Reyn- ssociates, the na- argest executive- ting firm. "The would be firing riends."

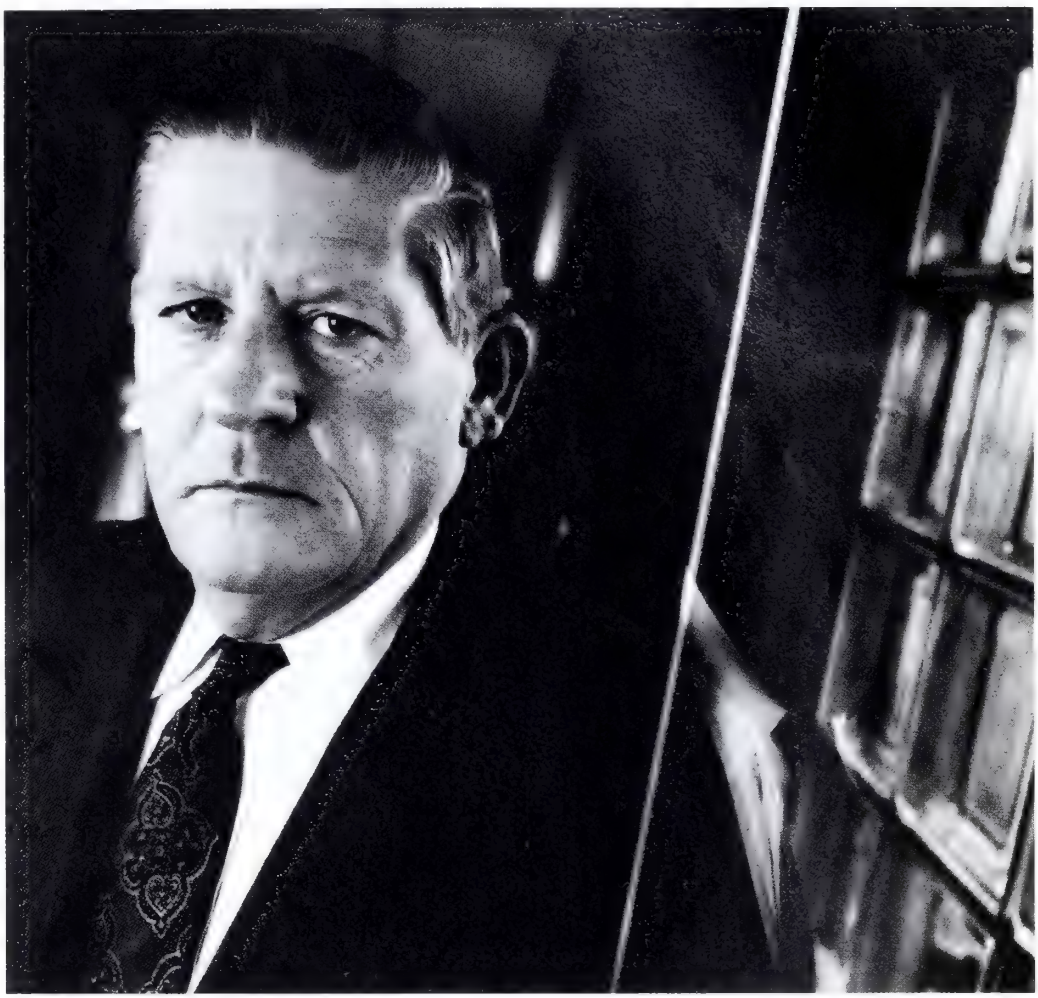
t's why boards ear at a number ge and troubled ations have re- longtime CEOs hrewd, analytical ers. In other they've filled the top slot with a ck insider who isn't wedded to the shed order.

them the tough managers for times. Tenneco's Walsh, for exam- a former U. S. Attorney in San who won a reputation as a steely tter during stints at Cummins En- o. and Union Pacific. At the rail- he eliminated layers of middle rement and squeezed work-rule sions out of the rail unions. Such rers can bring a more detached ear-eyed approach to a company that has lost its way. "Boards nowadays are hunting around for a much more dispassionate view on their businesses, cost structure, and management team," says Tom Neff, president of the executive head-hunting firm SpencerStuart, which handled the Tenneco search.

These new bosses usually walk through the door armed with a mandate for radical change—and they often need it. Indeed, BUSINESS WEEK's 1991 survey of chief executives at America's 1,000 most valuable corporations shows that the typical new CEO was installed at a company with higher-than-average sales and lower-than-average profits—in other words, a large but troubled outfit. And some of the industries that showed the highest turnover were also among the most recession-plagued. More than 23% of CEOs were newcomers at companies that make cars, trucks, auto parts, and tires. New bosses emerged at nearly 21% of metals and mining companies, and at more than 19% of publishers and broadcasters.

The new chief often has a rare opportunity to unleash a cataclysm—to restructure, slash employment, close plants, or sell businesses. Shareholders may be more willing to accept such moves—even though they often mean hefty charges against earnings or big cuts in dividends—because they believe there will be a payoff down the road. The board will back the new chief because he's doing what they hired him to do. And some employees who were frustrated by the ineffectual strategies of the old regime may even rally around a chief full of grand new notions—if they survive his purges.

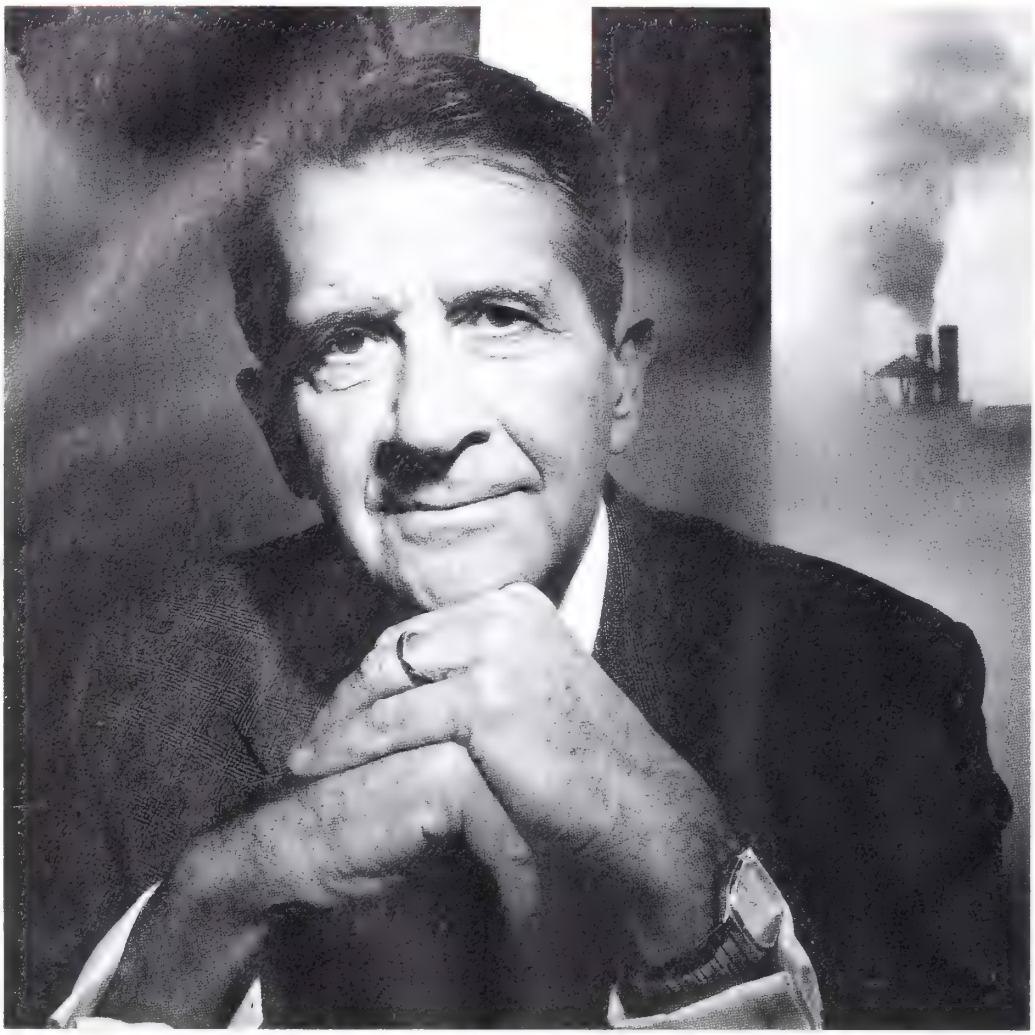
But what if the blood-and-guts bosses overdramatize the mess they have inherited to justify huge write-offs? Profits may get a nice boost in the next year or so—but then what? There's always the danger that the cost-cutter is just a sort



LAWRENCE BOSSIDY | *Allied-Signal*

Bossidy says he plans to cull until he's down to a select group of proven cash-spinners. Under his restructuring plan, eight companies have already gone

LARRY BARNS



STANLEY GAULT | *Goodyear*

At Rubbermaid, Gault produced a string of 41 record quarters. "Every quarter, you've got to hit the number, no excuses," says a former colleague

of corporate Terminator, a boss whose ideas don't extend much beyond delivering the body count. And while outsiders may do fine in a period of contraction, they probably won't know much about the companies' businesses and markets, insiders may not tell them what they need to know, and key personnel may jump ship. All the benefits of fierce management may turn out to be illusory if unaccompanied by ideas for growth.

LITTLE GAIN. Take the slash-and-burn strategy of former Firestone Tire & Rubber Co. CEO John J. Nevin, an outsider who was brought in from Zenith in 1979. During his radical restructuring of the tiremaker in the mid-1980s, Nevin sliced some 50,000 jobs, or about 50% of the work force, shuttered half of Firestone's North American tire plants, and sold off a half-dozen of the company's diversified businesses. Those moves stemmed the cash drains that once threatened the company.

But the pain didn't translate into steady gain. In 1988, Japan's Bridgestone Corp. acquired Firestone in a $2.6 billion deal. Admittedly, the deal was a windfall for shareholders. But Bridgestone/Firestone Inc. has since had to cope with the legacy of years of underinvestment. With the tiremaker in a severe slump, it's spending $1.5 billion to get the tiremaker's plants up to snuff.

Contrast that with the experience of another bear of a boss: Robert L. Crandall at AMR Corp., owner of American Airlines Inc. Since taking over as chief back in 1984, Crandall has transformed an industry also-ran into a global megacarrier. Crandall's relentless drive and fiery temper have earned him the nickname "Fang." But in an industry where labor costs typically eat about a third of revenues, his toughness has an edge. In fact, during the early 1980s, he managed to get his unions to accept a two-tier wage system for newcomers and veterans now a common practice.

True, the recession and ongoing fare wars have made for some awful times industry-wide. AMR has lost $[illegible] million so far this year and expects to lose money in the fourth quarter, too. But Crandall's investments to build up American's fleet and expand its faster-growing foreign markets have positioned the airline for an earnings surge once better days return.

Take a spin through BUSINESS WEEK's [illegible] Corporate Elite Directory, starting on page 185, and you'll see a startling array of new names now calling the shots at some premier corporations. In plenty of cases, the transfer of power was quite orderly and expected. But not so at some of the largest companies.

In late October, for example, Compaq Computer Corp.'s directors ousted Chief Executive Joseph R. "Rod" Canion, founder of the personal-computer powerhouse, replacing him with COO Eckhard Pfeiffer, who had built Compaq's paltry international business into a $1.8 billion operation. Goodyear Tire & Rubber Co. CEO [illegible] H. Barrett lasted only about two years before the company turned to Rubbermaid Inc.'s just-retired Chairman Stanley C. Gault. Similarly, USF&G Co. Chairman Jack Moseley, whose property-casualty insurer has been in a severe slump, was nudged out in favor of [illegible] man P. Blake Jr., a turnaround artist who had revived Chicago's Heller Financial Inc.

Meanwhile, both Tenneco's Ketchum and Allied-Signal Inc.'s chairman, Edward L. Hennessy Jr., were replaced by more bottom-line-leaning managers: Walsh at Tenneco and former GE V[illegible]

an Lawrence A. Bossidy at Al-
nd the late Armand Hammer
probably not look too kindly upon
ecessor at Occidental Petroleum
Ray R. Irani. After decades of
and firing protégés, Oxy's legend-
nder died late last year. Irani, an
emist, has been trying to stamp
uch of Hammer's sometimes-
legacy ever since.

represents something of a trend
the new CEO class of 1991: the
the technocrat. Nearly 22% of the
sses came up through engineer-
technical career paths, compared
st over 15% of their more senior
ues. The sharpest drop was
CEOs who rose through market-
merchandising: just over 12% of
class, down from more than 22%
onger-tenured folk. And, in a sign
increasing globalization of busi-
ese new CEOs are roughly twice
y as their longer-tenured breth-
ren to have some overseas experience.

Sadly, today's boss may need something more like nautical experience. "It's the lifeboat theory," explains USF&G's Blake. "The boat can't hold everyone, and not everyone is contributing to the boat's forward motion." Blake is throwing plenty of hands overboard. Earlier this year, he announced plans to cut 25% of the 12,300-member work force at the insurer, troubled by junk-bond investments and failed diversification efforts.

'HI. BYE.' Blake also had managers walking the plank during his days at Heller, which was then primarily a secured lender to corporations. Soon after arriving at the financial-services firm in 1984, he sacked most of its top management. His new team shifted Heller's lending away from corporate customers, where it often competed against more powerful banks, and got into the leveraged-buyout game. Result: Heller moved from a loss of $181.9 million in 1984 to a $102 million profit in 1989. With LBOs now out of fashion, Heller's net slipped to $75 million last year.

Senior managers in the old regime don't always wait for the newcomer to start cleaning house, of course. Consider the goings-on at Compaq, where the new chief, Pfeiffer, 50, is jettisoning founder Canion's formula of pumping out premium-priced personal computers for mostly corporate clients. Soon after Canion, 46, was ousted as chief executive, five vice-presidents—with duties ranging from manufacturing to product development—took early retirement. Compaq officials deny the two events are related.

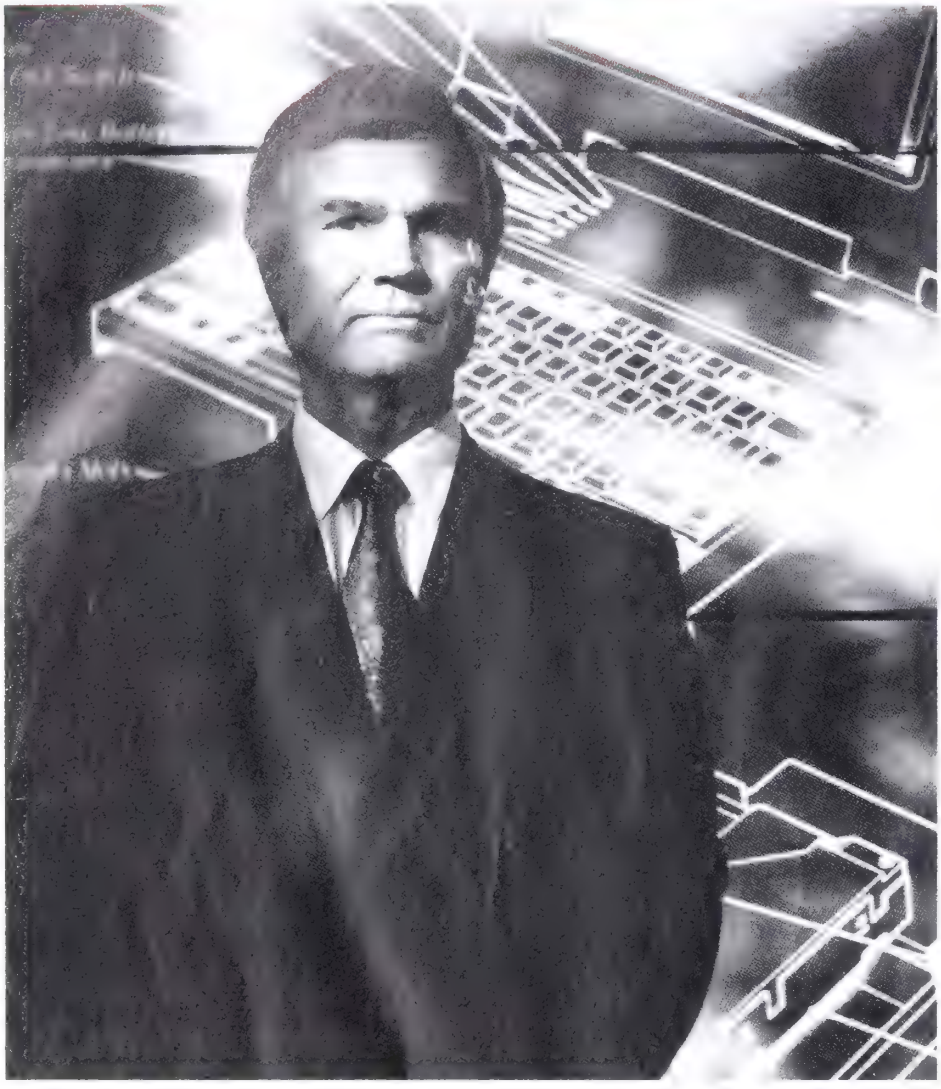
Still, Pfeiffer admits there has been plenty of turmoil. His penchant for tight fiscal management—something he picked up in his years at Texas Instruments Inc. in the price-competitive semiconductor business—ran counter to Canion's more casual approach. And the two clashed soon after Pfeiffer returned from his overseas stint. With price-discounting rivals such as Dell Computer Corp. stealing business, Pfeiffer and Compaq's co-founder and chairman, Benjamin M. Rosen, started to press in earnest for tighter spending controls about two months ago. But Canion balked at the notion of layoffs. "There was a definite difference of opinion between Mr. Canion and myself," says Pfeiffer.

So it would seem. Pfeiffer, with the blessing of Rosen, felt he deserved the brass ring at Compaq. And he had the board's ear. "Rod wasn't going fast enough to react to the computer market," says one board member. On Oct. 23, Compaq announced a third-quarter loss of $75 million and its first-ever round of layoffs, involving about 1,440 employees—something Pfeiffer had sought for months. A day later, Canion was out. Not surprisingly, some industry wags have taken to referring to the determined Pfeiffer as Cassius.

Like many hard-guy bosses, Pfeiffer is moving fast to reshape his company to his own vision. On Nov. 5, Com-

NORMAN BLAKE | *USF&G*

Blake is slashing the payroll: "It's the lifeboat theory. The boat can't hold everyone, and not everyone is contributing to the boat's forward motion"



ECKHARD PFEIFFER | *Compaq Computer*

After lobbying successfully for the brass ring, Pfeiffer has been quick to reshape Compaq to his vision. He plans to expand into markets the company had ignored

paq announced a "marketing revolution" that includes slashing costs by outsourcing some manufacturing and renegotiating supply contracts. He'll also aim at lower-priced segments of the PC market and expand into the home and educational markets.

Over at Tenneco, Walsh is also undoing much of his predecessor's work. Those Tenneco staffers accustomed to cushy perks under Ketelsen are in for a shock. Walsh plans to close the executive dining room. Going, too, will be one-third of corporate staff, as part of the broader layoffs already announced.

He also announced plans to sell $1 billion in assets at Tenneco, which has interests in natural-gas pipelines, shipbuilding, and farm equipment. That may include part or all of troubled J. I. Case. Thanks to Ketelsen's 1985 purchase of International Harvester's farm-equipment lines, Tenneco's Case unit now represents roughly one-third of sales. Walsh says he's analyzing the outfit. But what does a former lawyer know about tractors? Snaps Walsh: "When I was at Cummins, I didn't know a camshaft from a crankshaft. I learned."

He had better be a quick study. Because of the recession and an inventory glut, Case is expected to lose $560 million this year, according to Kidder, Peabody & Co. Throw in the restructuring charges, and Tenneco will probably post a $294 million loss this year, on $14.5 billion in sales.

Goodyear Chairman Stanley Gault is also under pressure to m fast. Goodyear is laboring ur a $3.6 billion debt load, stemm largely from the company's l fight with raider Sir James G smith. Another woe is G year's oil pipeline, which been a money-loser since opened in 1987. Finally, G year's name-brand business lost 20% of its U. S. replacem tire business since 1986.

If there's anyone who can tread Goodyear, it's Gault, a tail-oriented manager wit strong focus on customer ser and bottom-line results. "Ev quarter, you've got to hit number, no excuses," says a mer colleague at Rubberm where Gault strung together record quarters of earni growth.

TIGHT LID. But Gault, 65, is h ly a bean-counter. At Rub maid, he routinely visited plant and often spent ho hanging around hardware st watching consumers pick the company's housewa Once, he spotted a woman try unsuccessfully to pry open lid of a Rubbermaid microwa ble container and ordered u design change as a result.

The problems and solution Goodyear aren't quite so sim For now, Gault is working to down the company's debt l He has already sold assets ued at about $100 million and scheduled a $500 million eq offering for mid-Novem More relief may be on the v if major manufacturers make recent price hikes of u 8% on replacement tires stick another front, Gault has personally trumpeting G year's latest product innovation, ground-hugging Aquatred, designed wet roads, to dealers and the press.

At Allied-Signal, newcomer Boss 56, has also hit the ground running. logged 34 years at GE, so it's ha surprising that he inherited GE Chair John F. Welch Jr.'s lightning-quick siveness. And Bossidy has always be ferocious competitor. As a pitcher Colgate University, he led his tean the collegiate world series in 1955.

As Allied's new boss, Bossidy been hurling fastballs since day on mere three months after showing u the diversified manufacturer of a space components and auto parts, sidy announced a top-to-bottom rest turing that calls for eliminating 14

d employees, or 5,000 workers, di- eight businesses, and slashing npany's dividend by some 45%. He ans to cull Allied's flock of 84 sses down to proven cash-spin- It does help to come in from the id freshly appraise businesses," s.

INE. One who didn't come in from d is Occidental's Ray Irani. Over ears, Oxy founder Hammer t in a stream of would-be succes- uch as A. Robert Abboud, who n from First Chicago Corp., only them packing a short time later. ani managed to thrive under the ial Hammer. The 56-year-old won er's favor for his turnaround of unprofitable chemical operations. aking over in 1983, Irani trimmed ad and fine-tuned the unit's plants ran more efficiently. In a year, siness was profitable again. mer promoted Irani over 14 other esidents as president and chief op- officer in 1984. The Lebanese-born Irani, whose father was a math professor at American University of Beirut, has plenty of smarts. At age 22, he earned a doctorate in chemistry at the University of Southern California.

Irani is hardly keeping Oxy as a shrine to its founder's memory. One month after Hammer's death, he launched a $5 billion restructuring to refocus Oxy on its core oil, gas, and chemical businesses. He also took a $2 billion charge that included the costs of exiting some of Hammer's more offbeat business ventures, such as Armand Hammer Productions, a movie company that specialized in films tracking the travels of—you guessed it—Armand Hammer. "He was a romantic who fell in love with the things he bought," says Irani. "I try to be practical about what we've got."

Practical, indeed. Irani has already managed to reduce Oxy's once-staggering debt by $2.6 billion, to a reasonable 55% of total capital, through asset sales and cost-cutting. With low energy prices smacking rivals, Oxy's operating earnings are up 13.4%, to nearly $1.1 billion, on sales of $7.5 billion, through the first nine months.

Still, it has been a reign of pain under Irani so far. Back in January, Irani told analysts and employees that 1,000 jobs would go from existing operations, even though he says he knew the number would be far higher. He has since slashed 1,600—and now says 2,350 in all will go by this January. What gives? "We had only been in a few weeks, and I didn't want to go out with a number that I wasn't comfortable with," he says.

If all this sounds a bit cold-blooded, you're right. But then again, managing in these turbulent economic times isn't for the meek. And until better days return, count on the sharp blade of the guillotine to be hanging over chief executives and employees alike.

By Brian Bremner in New York, with Mark Ivey in Houston, Ronald Grover in Los Angeles, and bureau reports

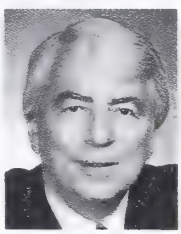
The Corporate Elite continues on page 180

WELCOME TO THE HOT SEAT: SIX CEOs WHO JUST ARRIVED

. LAURANCE FULLER
Amoco

nergy prices and onomic slowdown ougher times for 's oil and petro- cal businesses. e, Fuller kicked ecent round of lay- d cost-cutting ef- That will help, but gs are expected to be off this year. right spot: The recent blast of cold air Midwest could bode well for Amo- tural-gas business. This 53-year-old ssical-music lover and golf nut, with a handicap

MELVIN GOODES
Warner-Lambert



his tenure with in late October ouncing that the aceutical giant minate 2,700 bout 8% of its ork force, and some plants. 6-year-old Cana- as reason to look over his shoulder: a cardiovascular blockbuster and big pinner, goes off patent in 1993. e, the feds recently delayed approval gnex, a promising new drug to combat mer's, and asked for further study

MICHAEL A. MILES
Philip Morris

A nonsmoker calling the shots for the Marlboro Man? The arrival of Miles, 52, who replaces chain-smoker Hamish Maxwell, marks a continuation of the company's aggressive move away from tobacco and toward food, which now represents more than half of the total $58 billion in revenues. With his company spinning out cash aplenty, this former ad man may be on the prowl for a food-company acquisition. One rumored target: H.J. Heinz

MILES MARSH
Pet

This spin-off from the Whitman conglomerate boasts all-star brands such as Progresso soup and Old El Paso Mexican food. Miles, 44, recently launched the first national television campaign for these lines and has kept a tight lid on costs. Not all is well, though: Pet's Orval Kent salads and Whitman's Sampler chocolates have both been battered by competitive pricing pressures. Reared in Cape Town, South Africa, he used to work for Mike Miles at Kraft

SETH SCHOFIELD
USAir

He hopes to navigate this sputtering airline into calmer skies. USAir posted a net loss of $454 million last year and expects to turn in similarly poor results this year. Schofield is cutting employee wages and medical benefits, as well as selling planes—then leasing them back—to conserve cash. Still, turbulent times seem certain for Schofield, 52, who cracked into the business as a baggage handler

ALFRED ZEIEN
Gillette

Inherited his job following the sudden death of longtime chief Colman M. Mockler. The company continues to enjoy a smooth earnings glide thanks to its smash-hit Sensor razor. New products in the pipeline: a Sensor product for women and a new Braun electric razor with flexible heads. An amateur architect, Zeien, age 61, recently designed and built his new home on Cape Cod

A PORTRAIT OF THE BOSS

GEE, THIS GUY LOOKS FAMILIAR

What does it take to join the ranks of the Corporate Elite? Age, experience, and staying power. The man running the typical BUSINESS WEEK 1000 company—there are no women—is 56 years old. He has been working for the same company for more than 22 years, and he has been in the corner office for more than eight.

The chief's air of stability extends beyond the office. Nearly all of the CEOs in the Corporate Elite are married. Only 32 out of 1000 will admit they are currently divorced. Along with wedded bliss, the boss is a firm believer in progeny. Our typical CEO has 3.1 children, compared with 2.1 for the average American couple.

Members of the freshman class are not quite so prolific—they average only 2.8 offspring. The standout among new CEOs: Allied-Signal Inc.'s Lawrence A. Bossidy, with nine kids. And for many corporate leaders, business is a family affair, too. Over 10% of the executives in the Corporate Elite have children working for the company they manage.

Besides being almost uniformly white and predominantly Protestant, these bosses are a homogeneous bunch in other ways as well. You don't get to the top of the typical company, with $3.8 billion in revenues and $177 million in profits, by doing things differently. You get there by doing the right things, only better than everybody else. Our typical CEO went to college, where he majored in business. The odds are better than 1 in 5 that he played varsity sports. More than half of the Corporate Elite went on to graduate school. A majority—52%—did a stint in the military, though their numbers are declining as many World War II veterans move into retirement.

It's small wonder that after reaching the highest rung on the corporate ladder, the boss wants to stay there awhile: The rewards of running a BUSINESS WEEK 1000 company are plentiful. Our typical leader earns an average of $868,000. Pity his younger counterpart, who has been in the executive suite a year or less: This poor fellow is bringing home $608,000 this year.

To learn more about the group of men who collectively control $3.8 trillion in revenues, read on.

POWER DIPLOMAS

The tiger has taken a bite out of the bulldog. Yale University has traditionally produced the most CEOs in the Corporate Elite. But this year, Princeton University edged out the Elis as the leading alma mater for BUSINESS WEEK 1000 chieftains, with 35 alums in the corner office. Among them are H. Brewster Atwater Jr. of General Mills, Richard B. Fisher of Morgan Stanley, and William D. Ruckelshaus of Browning-Ferris Industries. Yale fell to second place this year, with 30 CEOs. Harvard University remained No. 3, with 24 grads.

Other elite schools that graduated a large number of corporate bosses include the University of Pennsylvania and its Wharton School, with 20; Northwestern University and Stanford University, both with 16; and Cornell University, with 15. Stanford is the only West Coast school represented among the Top 10 CEO-producing colleges.

Among the freshman class of CEOs, Princeton, Stanford, and, surprisingly, Purdue University had the most grads. State schools with the most CEO alums are Wisconsin, Michigan, and Texas.

When it comes to graduate diplomas—which hang on the walls of nearly half the members of the Corporate Elite—no school comes close to Harvard. Nearly 10% of the CEOs have a Harvard graduate degree in business, law, or some other specialty dressing up

their résumés. Next in lin Stanford, which has hac corporate bosses through its grad progra Other popular places to a graduate diploma inc Columbia University and sachusetts Institute of T nology, both with 19, Northwestern, with 17.

Among state schools, M gan was the leader, wit CEOs earning graduate d mas in Ann Arbor.

FOLLOW THE YELLOW BRICK ROAD

What's the best path up the corporate ladder? As in previous years, more CEOs started out in finance or accounting than in any other area. A quarter of the bosses in the Corporate Elite won their management stripes by crunching numbers. Marketing was the second-most-popular route to the top—nearly 21% of today's CEOs were once marketing men.

But just because you don't have a finance or marketing background doesn't mean you won't sit in the corner office someday. About 16% of corporate bosses began their careers in engineering or technical positions. And the numbers are even higher among the freshman class of CEOs, where 22% identify themselves as techies, including Anthony S. D'Amat Borden Inc. and Alfred Zeien of Gillette Co.

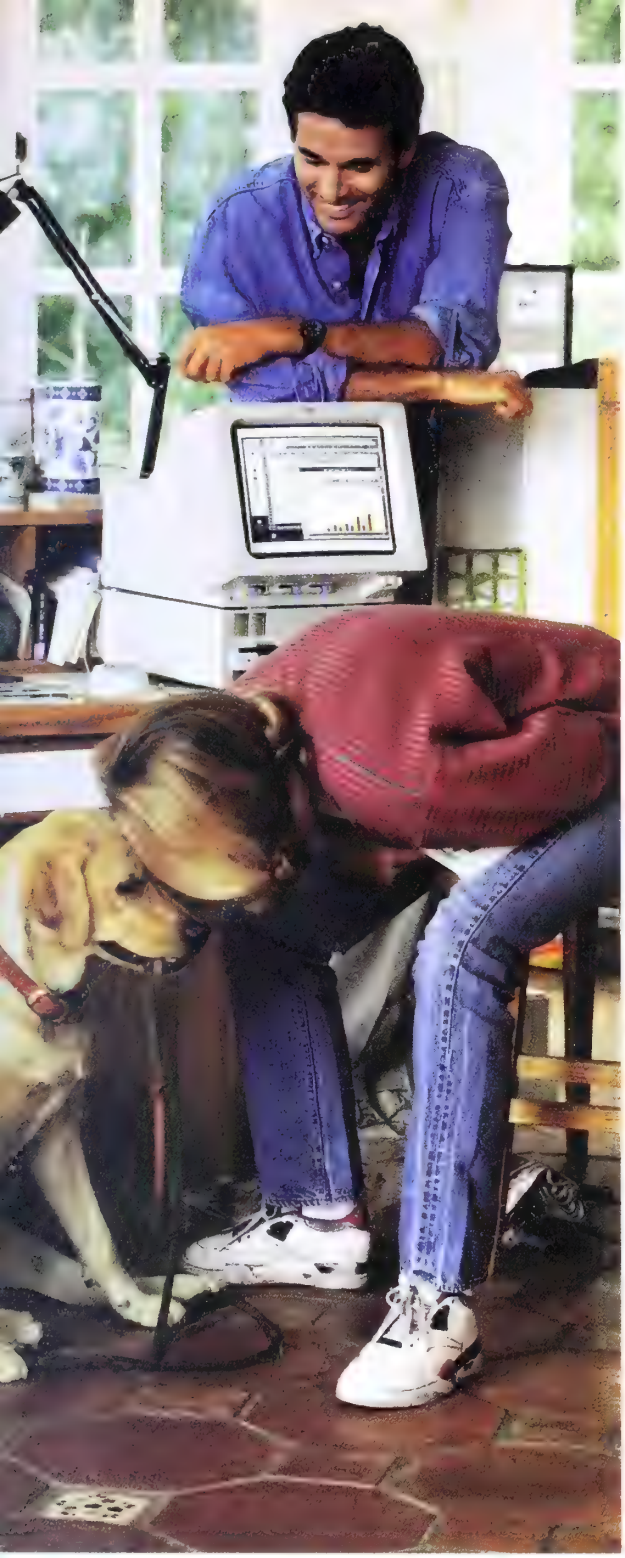
Besides these techn types, some chief execut make it to the top floor the shop floor. Fully 9% BUSINESS WEEK 1000 co nies are run by mana who started out in manu turing or production.

It used to be that a law gree was the ticket to reer in government. But t days, knowing how to wr legal brief seems to com handy in the private secto well. About 7% of the C rate Elite identified law their career path, and 10% of CEOs are law-s graduates.

Five CEOs can raise hands the next time som asks: "Is there a doctor i house?" Among them ar Roy Vagelos of Merck & and Theodore Cooper of john Co.

The groves of acad were the training ground five corporate bosses. An those who honed their a agement skills in an ec tional setting: Kroger Joseph A. Pichler, who i former dean of the Unive of Kansas School of Busi

ILLUSTRATIONS BY DAVID FLAHERTY



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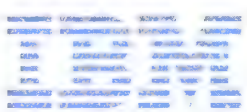

The Corporate Elite

TO GET AHEAD, GO ABROAD

If you're thinking about ducking that foreign assignment in order to stay close to the corporate nerve center, think again. Based on the responses of executives running BUSINESS WEEK 1000 companies, a stint abroad is becoming a valuable step in the corporate climb. Only 13% of all CEOs said they did a tour of duty overseas. But 20% of the men who took the helm in the past year have worked outside the U. S.

Not surprisingly, Canada was the country where most American bosses went to gain foreign experience. Sixteen CEOs say they have put in time north of the border. Proximity and lack of a language barrier obviously make a Canadian stint easier than one in Peru or Jordan.

After Canada, Britain was the most popular destination for future CEOs, followed by Belgium. Among the heavyweights who spent time in Britain are Exxon's Lawrence G. Rawl, Ford's Harold A. Poling, and Xerox' Paul A. Allaire.

By and large, CEOs with foreign experience got it in Canada or Europe. Very few corporate bosses have lived and worked in Latin America or the Far East.

But there are exceptions. Among those who were posted to exotic locales were Brian G. Dyson of Coca-Cola Enterprises, who worked in Venezuela. Ronald W. Haddock of Fina Inc. commuted between China and the U. S. every six weeks from 1982 to 1986. Robert J. Pfeiffer of Alexander & Baldwin Inc. is one of the few members of the Corporate Elite to have spent time in Japan. His Asian experience also includes Korea, Taiwan, the Philippines, and Hong Kong.

A CEO BY ANY OTHER NAME

Nearly all of the bosses in the Corporate Elite carry the title of chief executive officer. One who doesn't: Joseph M. Clapp, who heads trucking company Roadway Services Inc., where there is no CEO. Clapp is Roadway's chairman and president.

Another special situation: Herbert M. and Marion O. Sandler, the husband-and-wife team who operate Golden West Financial Corp., alternate as chief executive year by year. Because it's Herbert's turn as Golden West's CEO this year, there are no women running BUSINESS WEEK 1000 companies.

Almost half of the CEOs in the Corporate Elite also hold the office of chairman. An additional 20% serve as president of their companies, too.

And how many of these honchos wear three hats—chairman, CEO, and president? Quite a few. Nearly a quarter of these corporate bosses occupy the top three spots in their company.

A handful of CEOs double as chief operating officers. Among them are Robert F. Daniell of United Technologies, Morry Weiss of American Greetings, and Roger W. Kober of Rochester Gas & Electric. And a few CEOs act as vice-chairman, including Stewart D. Blair of United Artists Entertainment, John J. Shea of Spiegel, and Edward E. Penhoet of Chiron.

But some of the additional roles played by members of the Corporate Elite are a bit more exotic. American Express Co. CEO James D. Robinson III is also the company's chief quality officer. At Apple Computer Inc., Chief Executive John Sculley serves as chief technical officer. And Daniel E. Evans of Bob Evans Farms Inc. acts as his company's corporate secretary.

Some corporate bosses hold management jobs at more than one company. For stance, Milton H. Ward Freeport-McMoRan Copper Gold Inc. is also chief oper ing officer of parent compa Freeport-McMoRan Inc.

HOW THEIR COMPANIES ARE DOING

In exchange for his hefty paycheck—which we take a closer look at below—the CEO manages a weighty enterprise. A BUSINESS WEEK 1000 company averaged $3.8 billion in sales in 1990, up 7.4% from $3.6 billion in 1989. But our typical CEO had better keep a closer eye on the bottom line: The average profit slipped 5%, to $177 million from $186 million.

General Motors Corp. had the highest sales of any company, with $123.3 billion. GM also lost the most money—$2 billion. Gensia Pharmaceuticals Inc., which does drug research, was the company with the smallest sales—zero for the past two years. IBM earned the most—$6 billion.

Fortunately for CEOs and investors alike, the decline in profits hasn't hurt average market capitalization, whic up 26.6%, to $3.2 billion fr $2.5 billion. The rising st market has lifted the aver price per share of a BUSIN WEEK 1000 company by 23. to 45¾ from around 37. excluding off-the-chart Be shire Hathaway Inc.—rece ly trading at $8,500 a shar the average stock price up 21%, to about 37 fr around 30½.

Exxon Corp. has the larg market capitalization of company on the list, at $ billion. On the other end the spectrum is Measu Corp., with a market cap $385 million.

Along with rising st prices has come a boost in average price-earnings r of the BUSINESS WEEK 1 It's now 18.1, compared w 13.6 a year ago.

THE CUTBACKS STOP HERE

Recession? What recession? Even though average profits for the BUSINESS WEEK 1000 fell last year, Corporate Elite paychecks continued to grow. The average CEO's base salary and bonus hit $868,000, up 3.2% from 1989. The rate of increase has slowed, though, from last year's 7% growth.

Not everyone in the Corporate Elite bags that kind of cash. Some, such as David Rockefeller of Rockefeller Center Properties Inc., collect no salary. Of course, he can probably afford it. Similarly, Berkshire Hathaway Inc. CEO Warren E. Buffett limits his annual salary to a modest $100,000, though he takes in more from Berkshire dividends than some CEOs see in their paychecks. Buffett is also forgoing a salary in his new post as head of beleaguered Salomon Brothers Inc.

If earning big bucks is your top concern, stay away from utilities, where the aver CEO paycheck of $452,00 the lowest of any sector. er industries at the botto the list are containers packaging, with an aver CEO take of $592,000, building materials, $602,0

The fattest paychecks collected by bosses in consumer-products busin where CEOs get an averag $1,367,000. Heads of congl erates get the second-big checks—an average $1,357,000—while bosses leisure-time companies

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an average of $1,209,000.

Reebok International Ltd.'s Paul Fireman earns the most: $14.8 million. Walt Disney Co.'s Michael D. Eisner is close, with $11.2 million. Herbert J. Siegel of Chris-Craft Industries Inc. made $8.4 million, and Charles Lazarus of Toys 'R' Us Inc., $5.4 million.

'IN MY PREVIOUS LIFE, I WAS...'

While the Corporate Elite seem like a pretty predictable bunch at first glance, many of today's CEOs took some strange detours on the way to the executive suite. A newspaperman who likes hanging out with cops? Washington Post Co.'s Donald E. Graham once worked as a policeman.

At least one CEO really knows his way around the golf course: The head of Textron Inc., Beverly F. Dolan, got his start in something much humbler than conglomerates. He founded golf-cart maker E-Z Go, which Textron acquired in 1960. Before joining the fabric business, Hancock Fabrics Inc. CEO Morris O. Jarvis was a manager at United Funeral Service.

The door between government and business continues to revolve. Stewart W. Bainum Jr. of nursing-home operator Manor Care Inc. was formerly a Maryland state senator. All told, at least four bosses came from federal government agencies, while seven came directly from the military.

And the door between General Electric Co. and executive suites elsewhere revolves at an ever-faster rate. A dozen CEOs came from Jack Welch's school for managers—eight of them in the freshman class alone. Among the new bosses who spent time at GE are Borden's Anthony S. D'Amato, Allied-Signal's Lawrence A. Bossidy, and Rubbermaid's Walter W. Williams.

If you can't work for GE, try donning a green eyeshade. At least 19 CEOs in our Corporate Elite joined their companies from accounting firms, while at least 10 others came over from consulting firms.

WUNDERKINDER AND ELDER STATESMEN

The average CEO is in his mid-50s. But who's average? Youngest is Michael S. Dell of Dell Computer Corp., at 26 years old, while elder statesman Milton J. Petrie of Petrie Stores Corp. is 89. There are two other bosses who are octogenarians—Associated Communications Corp.'s Jack N. Berkman, 86, and Lawter International Inc.'s Daniel J. Terra, 80. And an additional 16 are 75 or older, including Block Drug Co.'s Leonard N. Block, 79, and Dillard Department Stores Inc.'s William T. Dillard, 77.

But 17 of the top bosses are under age 40. Some of these youthful CEOs made it to the corner office by starting their own companies. Junior members of the Corporate Elite include such boomer *wunderkinder* as Microsoft CEO William H. Gates III, 36; Sun Microsystems Chief Executive Scott G. McNealy, 37; and Lotus Development's Jim P. Manzi, 39. But you needn't be a techie to reach the top before 40: Just ask Charles D. Way, 38, of Ryan's Family Steak Houses Inc.

While the average age of Corporate Elite CEOs hasn't changed much in the past few years, the ranks of the very oldest bosses are thinning. In 1990, there were 359 chief executives aged 60 or older. This year, there are just 343. And only 22 of the 154 new CEOs are older than 60.

THE GAMES THEY PLAY

The members of BUSINESS WEEK's Corporate Elite work hard, but they play hard, too—or at least, they once did. Over 20% of the CEOs say they played varsity sports as college undergraduates. Football was their most popular choice, followed by baseball or softball, then basketball.

With their school days long behind them, nearly all CEOs say they continue to play sports in their spare time. Based on the responses to BUSINESS WEEK's survey, the ability to play golf and tennis may be a prerequisite for joining the Corporate Elite club.

A lot of CEOs talk about making their companies lean and mean, and a fair number are dedicated to staying lean and mean themselves. Just look at Brian G. Dyson of Coca-Cola Enterprises Inc., who is still competing in triathlons at age 56.

Then there are some real bruisers—the handful who identified weight-training as a hobby. Among them are John W. Teets of Dial, Stephen M. Berkley of Quantum, and Michael G. King of King World Productions.

More than a dozen CEOs they get away from it all going scuba diving. But J A. Rollwagen of Cray search Inc. prefers to stay top by windsurfing, and does Joel B. Alvord of Sh mut National Corp. Georg Collins of T. Rowe Price A ciates Inc. washes away stresses of running his inv ment firm by going for l distance swims.

But not all CEOs favor times that are so physic demanding. Charles P. L rus of Toys 'R' Us Inc. croquet is his idea of a g time, while John T. Hartle Harris Corp. enjoys the n subtle rewards of raising chids. Michael D. Dingma Henley Group Inc. is an collector of toy trains.

TRIVIA

David W. Kemper of Commerce Bancshares Inc. could as easily be teaching literature as running a bank. The Harvard graduate has a master's degree in English literature from Oxford University as well as the more standard MBA from Stanford.... Alan C. Hasselwander of Rochester Telephone Corp. is a graduate of St. Bernard's Seminary.... Milton J. Petrie of Petrie Stores Corp. has been in office the longest—59 years.... More than 50 CEOs share their last name with the company they run.... New York produces the most CEOs, followed by Illinois and Pennsylvania.... Nearly 140 of the CEOs say they founded the company they manage.... Corporate leaders hol technical or business deg outnumber liberal-arts ma 2 to 1.... A dozen chief e utives attended mili schools.... Barron Hilto Hilton Hotels Corp. en hot-air ballooning.... B me up, Scotty: Darryl F. A of Trinova Corp. collects *Trek* memorabilia.... E state has produced at l one member of this ye Corporate Elite except V ming and Vermont Armco Inc.'s Robert Pur was once an engineer for Indiana Toll Road Com sion.... John W. Rollins of Rollins Environmental vices Inc. studied with ternational Correspond Schools.

By Monica Roman, Robert Mims, and Fred Jespersen

THE CORPORATE ELITE

The Chief Executives of the Business Week 1000, the most valuable publicly held U.S. companies

	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY $ THOUS
T LABORATORIES	DUANE L. BURNHAM	IL	6200	966	23200	1/22/42	MN	BS, U. of Minn. '63	MBA, U. of Minn. '72	Finance	9	2	1161
	SAMUEL H. MASLAK	CA	283	48	1100	7/23/48	DC	SB, MIT '71	ScD, MIT '75	Technical	10	10	600
YSTEMS	JOHN EDWARD WARNOCK	CA	169	40	1100	10/6/40	UT	BS, U. of Utah '61	MS '64/PhD '69, U. of Utah	Technical	9	3	379
D MICRO DEVICES	WALTER JEREMIAH SANDERS III	CA	1100	−54	1000	9/12/36	IL	BS, U. of Ill. '58		Marketing	22	22	651
D TELECOMMUNICATIONS	STEPHEN E. RAVILLE	GA	351	28	387	5/12/47	KS	BA, U. of Va. '69	JD, U. of Ga. '72; LLM, Emory '78	Legal	8	6	497
FE & CASUALTY	JAMES THOMAS LYNN	CT	19000	614	3900	2/27/27	OH	AB, Western Reserve '48	LLB, Harvard '51	Legal	7	7	1067
D PUBLICATIONS	WILLIAM O. TAYLOR	MA	536	24	623	7/19/32	MA	BA, Harvard '54		Finance	35	10	945
ON (H. F.)	RICHARD H. DEIHL	CA	4800	191	2100	9/9/28	CA	AB, Whittier '49	Cal/Berkeley	Mktg/Finance	32	8	1261
ATER TECHNOLOGIES	ECKARDT C. BECK	NJ	610	7	454	5/21/43	NY	AB, Emerson '68	MPA, NYU '71	Government	4	4	503
DUCTS & CHEMICALS	DEXTER F. BAKER	PA	2900	230	3900	4/16/27	MA	BS, Lehigh '50	MBA, Lehigh '57	Sales/Mgmt	39	5	1094
E FREIGHT	ROBERT STANLEY CLINE	WA	1200	34	533	7/17/37	IL	AB, Dartmouth '59	Columbia, NYU	Finance	26	7	601
NTERNATIONAL	J. SPENCER STANDISH	NY	560	8	477	4/17/25	NY	BS, MIT '45		Tech/Prodn	39	8	355
CULVER	LEONARD H. LAVIN	IL	796	35	678	10/29/19	IL	BA, U. of Wash. '40		Marketing	37	37	1200
ON'S	GARY GLENN MICHAEL	ID	8200	234	5700	9/23/40	MT	BS, U. of Idaho '62		Finance	25	1	697
NDARD	RAY B. MUNDT	PA	4300	91	1400	8/10/28	WI	BS, Wis. State '53	Syracuse	Marketing	21	11	1041
	PAUL BRAINERD	WA	135	24	558	11/17/47	OR	BS, U. of Ore. '70	MA, U. of Minn. '75	Entrepreneur	7	7	245
ER & ALEXANDER SERVICES	TINSLEY H. IRVIN	NY	1300	55	847	5/30/33	GA	BBA, Ga. State '55		Insurance	38	4	817
ER & BALDWIN	ROBERT JOHN PFEIFFER	HI	674	115	1200	3/7/20	Fiji			Operations	31	12	1675
NY	FRED M. KIRBY II	NY	1400	69	609	11/23/19	PA	AB, Lafayette '42	Harvard	Management	33	24	971
NY LUDLUM	ROBERT PETER BOZZONE	PA	1100	69	880	8/9/33	NY	BS, RPI '55		Production	36	1	609
NY POWER SYSTEM	KLAUS BERGMAN	NY	2300	210	2200	5/24/31	Germany	AB, Columbia '53	LLB, Columbia '55	Legal	20	6	470
N	GAVIN S. HERBERT	CA	884	81	1500	3/26/32	CA	BS, USC '54		Management	36	14	867
GNAL	LAWRENCE A. BOSSIDY	NJ	12300	462	5200	3/5/35	MA	BA, Colgate '57		Finance	0	0	NA
	JOE T. FORD	AR	1600	193	3200	6/24/37	AR	BSBA, U. of Ark. '59		Finance	32	4	752
	RODNEY SMITH	CA	78	13	458	4/28/40	England	IERE, Southampton '63		Technical	8	8	246
M CO. OF AMERICA	PAUL H. O'NEILL	PA	10700	295	5900	12/4/35	MO	BS, Fresno State '60	MPA, Indiana '66	Economics	4	4	825
	MARTIN STEPHEN GERSTEL	CA	99	25	2300	6/26/41	CT	BS, Yale '64	MBA, Stanford '68	Finance	23	4	358
	ALLEN BORN	NY	3800	226	1800	7/4/33	CO	BS, Texas/El Paso '58		Mining	24	6	1162
LD	TIMOTHY J. HADDON	CO	150	28	713	11/26/48	Zimbabwe	BS, Colorado Mines '70		Technical	15	2	270
	JOHN CLARK LEWIS JR.	CA	2200	184	1500	10/15/35	MT	BS, Cal/Fresno '57		Marketing	14	8	829
A HESS	LEON HESS	NY	6900	483	4700	3/13/14	NJ			Marketing	45	26	300
N BRANDS	WILLIAM J. ALLEY	CT	8300	596	9100	12/27/29	TX	BBA, U. of Okla. '51	JD, U. of Okla. '54	Insurance	13	4	1627
N CYANAMID	GEORGE J. SELLA JR.	NJ	4600	108	6200	9/29/28	NJ	BS, Princeton '50	MBA, Harvard '52	Technical	37	9	1237
N ELECTRIC POWER	RICHARD E. DISBROW	OH	5200	549	5600	9/20/30	NJ	BS, Lehigh '52	MS, Newark '59; MS, MIT '65	Technical	37	1	540
N EXPRESS	JAMES D. ROBINSON III	NY	24300	338	12500	11/19/35	GA	BS, Ga. Tech '57	MBA, Harvard '61	Finance	21	14	1798
N FAMILY	DANIEL P. AMOS	GA	2700	117	2000	8/13/51	FL	BS, U. of Ga. '73		Marketing	18	1	474

THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO
AMERICAN GENERAL	HAROLD SWANSON HOOK	TX	4500	562	4300	10/10/31	MO	BS, U. of Mo. '53	MA, U. of Mo. '54	Finance/Adm	21	13
AMERICAN GREETINGS	MORRY WEISS	OH	1400	82	1200	5/1/40	Czech.	BA, Case Western '64		Marketing	30	4
AMERICAN HEALTH PROPERTIES	WALTER JAMES McNERNEY	CA	59	28	412	6/8/25	CT	BS, Yale '47	MHA, U. of Minn. '50	Teaching/Mgmt	4	4
AMERICAN HOME PRODUCTS	JOHN R. STAFFORD	NY	6800	1200	20400	10/24/37	PA	AB, Dickinson '59	LLB, Geo. Washington '62	Legal/Mgmt	21	5
AMERICAN INTERNATIONAL GROUP	MAURICE RAYMOND GREENBERG	NY	16200	1400	17900	5/4/25	NY	Cert., U. of Miami '48	LLB, N.Y. Law '50	Insurance	31	24
AMERICAN MEDICAL HOLDINGS	ROBERT W. O'LEARY	TX	2500	−82	481	12/3/43	MA	BS, U. of Mass. '65	MA, SUNY '68; JD, Suffolk '73	Health care	0	0
AMERICAN NATIONAL INSURANCE	ORSON C. CLAY	TX	1100	109	934	7/26/30	UT	BS, Brigham Young '55	MBA, Harvard '59	Finance	21	13
AMERICAN PRESIDENT	BRUCE SEATON	CA	2300	−60	487	4/1/25	PA	BS, UCLA '49		Finance/Mktg	14	8
AMERICAN STORES	JONATHAN L. SCOTT	UT	22200	182	2800	2/2/30	ID	BA, Coll. of Idaho '51		Operations	3	3
AMERICAN TELEPHONE & TELEGRAPH	ROBERT E. ALLEN	NY	51300	2700	42900	1/25/35	MO	BA, Wabash '57		Operations	34	3
AMERICAN TV & COMMUNICATIONS	JOSEPH J. COLLINS	CT	1100	120	4900	7/27/44	NY	AB, Brown '66	MBA, Harvard '72	Marketing	19	3
AMERICAN WATER WORKS	JAMES V. LaFRANKIE	NJ	571	57	670	3/26/27	PA	BS, Georgetown '64		Operations	44	8
AMERITECH	WILLIAM LEE WEISS	IL	10700	1300	16400	5/21/29	PA	BS, Penn State '51		Technical	8	8
AMERITRUST	CRAIG R. SMITH	OH	1300	−96	1100	5/30/25	OH	BS, Case Tech '46		Sales/Mgmt	1	1
AMETEK	WALTER E. BLANKLEY	PA	661	37	538	9/23/35	PA	BSME, Princeton '57		Sales/Tech	31	1
AMGEN	GORDON M. BINDER	CA	381	34	6700	9/4/35	MO	BS, Purdue '57	MBA, Harvard '62	Finance	9	3
AMOCO	H. LAURANCE FULLER	IL	28000	1900	26300	11/8/38	IL	BS, Cornell '61	JD, DePaul '65	Tech/Legal	30	1
AMP	HAROLD A. McINNES	PA	3000	287	5700	9/17/27	CT	BS, MIT '49		Production	26	2
AMR	ROBERT L. CRANDALL	TX	11700	−40	4000	12/6/35	RI	BS, U. of R.I. '57	MBA, Wharton '60	Mktg/Finance	18	7
AMSCO INTERNATIONAL	DAVID A. NELSON	PA	336	17	475	5/19/47	IL	BS, No. Illinois '69	MBA, No. Illinois '72	Marketing	4	4
AMSOUTH BANCORPORATION	JOHN W. WOODS	AL	896	77	752	8/18/31	IL	BA, U. of the South '54		Banking	22	20
ANADARKO PETROLEUM	ROBERT J. ALLISON JR.	TX	388	55	1600	1/29/39	IL	BS, U. of Kan. '60		Technical	18	5
ANHEUSER-BUSCH	AUGUST A. BUSCH III	MO	10700	842	15400	6/16/37	MO	U. of Ariz.	Siebel Tech '61	Operations	34	12
ANTHEM ELECTRONICS	ROBERT SAMUEL THROOP	CA	408	23	403	8/14/37	PA			Marketing	19	19
AON	PATRICK G. RYAN	IL	2600	239	2400	5/15/37	WI	BS, Northwestern '59		Mktg/Sales	9	9
APACHE	RAYMOND PLANK	CO	261	40	817	5/29/22	MN	BA, Yale '44		Oil & gas	37	13
APPLE COMPUTER	JOHN SCULLEY	CA	5600	475	6300	4/6/39	NY	BA, Brown '61	MBA, Wharton '63	Mktg/Adm	8	8

EXECUTIVE TO WATCH

▶ Big shift for this prototypical startup, which has struck a broad alliance with archrival IBM. The two hope to yoke knowhow and research to develop a new computer standard for the 1990s. Still, this after-hours architect can't rest easy. His lower-price Macintosh Classic has be a smash, helping boost market share this year. But the new pricing strategy compresses margins—and overall earnings. Bright spot: Sales of new notebook computers look strong.

APPLIED MATERIALS	JAMES C. MORGAN	CA	567	34	498	8/27/38	IL	BS, Cornell '62	MBA, Cornell '63	Tech/Finance	15	15
ARCHER DANIELS MIDLAND	DWAYNE O. ANDREAS	IL	7800	484	8000	3/4/18	MN	Wheaton		Finance/Ops	25	21
ARCO CHEMICAL	ALAN R. HIRSIG	PA	2800	308	3500	9/30/39	WI	BS, Ill. Tech '61		Technical	30	1
ARGONAUT GROUP	CHARLES EMIL RINSCH	CA	611	90	667	6/28/32	IN	BS, Indiana '53	MS, Butler '59; MBA, Stanford '60	Finance	26	4
ARKLA	THOMAS F. McLARTY III	LA	2400	106	2000	6/14/46	AR	BS, U. of Ark. '69		Transport	8	7
ARKLA EXPLORATION	CARL S. QUINN	LA	160	7	425	3/2/31	MO	BS, U. of Mo. '53		Finance	3	2
ARMCO	ROBERT L. PURDUM	NJ	1700	−55	420	6/15/35	OH	BS, Purdue '56		Technical	29	1
ARMSTRONG WORLD INDUSTRIES	WILLIAM WHITE ADAMS	PA	2500	143	1200	5/14/34	IA	BS, Iowa State '56		Marketing	35	4
ARNOLD INDUSTRIES	EDWARD H. ARNOLD	PA	159	21	398	8/11/39	PA	BA, Notre Dame '61		Ops/Finance	28	17
ARVIN INDUSTRIES	JAMES K. BAKER	IN	1700	33	449	12/21/31	IN	AB, DePauw '53	MBA, Harvard '58	Marketing	36	10
ASARCO	RICHARD De J. OSBORNE	NY	2200	149	1100	3/19/34	NY	AB, Princeton '56		Finance	17	6
ASHLAND OIL	JOHN RICHARD HALL	KY	8600	182	1800	11/30/32	TX	BS, Vanderbilt '55		Production	34	10
ASSOCIATED COMMUNICATIONS	JACK NEVILLE BERKMAN	PA	36	11	644	2/12/05	England	AB, U. of Mich. '26	JD, Harvard '29	Communs	13	13
AST RESEARCH	SAFI U. QURESHEY	CA	534	35	888	2/15/51	Pakistan	BS, U. of Karachi '70; BS, U. of Tex. '75		Technical	11	11
ATLANTA GAS LIGHT	DAVID R. JONES	GA	1000	46	812	5/22/37	GA	BS, Ga. Tech '59		Technical	31	4
ATLANTIC ENERGY	E. DOUGLAS HUGGARD	NJ	717	80	880	11/22/33	DE	BS, U. of Del. '55	MS, U. of Del. '61	Tech/Prodn	36	6
ATLANTIC RICHFIELD	LODWRICK MONROE COOK	CA	18000	1700	18800	6/17/28	LA	BS '50/BS '55, La. State	MBA, SMU '65	Mktg/Prodn	35	6
AUTODESK	ALVAR JAMES GREEN	CA	238	57	1200	4/5/46	England	BBA, Eastern Mich. '74		Finance	7	5
AUTOMATIC DATA PROCESSING	JOSH S. WESTON	NJ	1700	212	4900	12/22/28	NY	BS, CCNY '50	MS, U. New Zealand '51	Finance/Ops	21	9
AUTOZONE	JOSEPH R. HYDE III	TN	672	23	1400	12/27/42	TN	BS, U. of N.C. '65		Distribution	12	12
AVERY DENNISON	CHARLES D. MILLER	CA	2600	6	1500	3/1/28	CT	BA, Johns Hopkins '49		Mktg/Prodn	27	14
AVNET	LEON MACHIZ	NY	1800	56	918	6/23/24	NY	Cooper Union		Marketing	23	3
AVON PRODUCTS	JAMES EDWARD PRESTON	NY	3500	195	2600	4/30/33	OH	BS, Northwestern '55		Marketing	27	3

THE CORPORATE ELITE

	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	SENIOR COMPANY YRS.		PAY $ THOUS.
R HUGHES	JAMES D. WOODS	TX	2600	142	3700	7/24/31	KY	BA, Cal/Fullerton '67	Cal/Fullerton	Finance	36	5	1253
	DELMONT A. DAVIS	IN	1400	50	769	6/11/35	CO	BS, U. of Colo. '59	U. of Colo., So. Miss	Production	23	0	462
D MEDICAL PRODUCTS	DALE H. BALLARD	UT	29	6	390	12/12/22	UT	BS, U. of Utah '51		Marketing	13	13	174
ORE GAS & ELECTRIC	GEORGE V. McGOWAN	MD	2200	175	2600	1/30/28	MD	BS, U. of Md. '51		Technical	41	4	474
NE	JOHN BONNET McCOY	OH	3500	423	7300	6/11/43	OH	BA, Williams '65	MBA, Stanford '67	Banking	21	7	1248
RP HAWAII	H. HOWARD STEPHENSON	HI	954	96	1200	7/15/29	KS	BA, U. of Mich. '50	JD, Missouri/K. City '58	Finance	32	3	1101
G	MARTIN G. CARVER	IA	586	79	1400	5/10/48	IA	BA, U. of Iowa '70	MBA, Indiana '72	Finance	12	10	348
F BOSTON	IRA STEPANIAN	MA	5700	−438	817	11/14/36	MA	BA, Tufts '58	MBA, Boston Coll. '71	Banking	28	5	650
F NEW YORK	J. CARTER BACOT	NY	5300	308	2200	2/7/33	NY	AB, Hamilton '55	LLB, Cornell '58	Legal/Bank	32	10	875
MERICA	RICHARD MORRIS ROSENBERG	CA	12300	877	9400	4/21/30	MA	BS, Suffolk '52		Banking	4	1	1600
S TRUST NEW YORK	CHARLES STEADMAN SANFORD JR.	NY	7900	665	4800	10/8/36	GA	BA, U. of Ga. '58	MBA, Wharton '60	Banking/Fin	30	4	1500
NCE	RICHARD L. CARRION	PR	637	63	517	11/26/52	PR	BS, Wharton '75	MA, MIT '76	Finance	15	3	323
C.R.)	GEORGE T. MALONEY	NJ	785	40	1400	8/28/32	PA	BS, Siena '54		Sales/Mktg	33	3	459
T BANKS	CHARLES EDWARD RICE	FL	3300	67	2200	8/4/35	TN	BA, U. of Miami '58	MBA, Rollins '64	Finance/Bank	26	12	925
	J. LANDIS MARTIN	TX	599	20	501	11/5/45	NE	BS, Northwestern '68	JD, Northwestern '73	Legal	4	4	375
MOUNTAIN GOLD	KARL E. ELERS	TX	143	16	527	9/26/38	IL	BS, U. of Ariz. '61		Production	4	1	447
& LOMB	DANIEL E. GILL	NY	1400	131	2900	6/24/36	IL	BS, Northwestern '58		Finance	13	10	1340
INTERNATIONAL	VERNON R. LOUCKS JR.	IL	8100	40	10000	10/24/34	IL	BA, Yale '57	MBA, Harvard '63	Administration	26	11	1749

EXECUTIVE TO WATCH

▶ Has put the world's biggest hospital supplier through several restructurings—and it's paying off in healthy profits. But scandal overshadows his success. The feds are investigating whether the company doled out kickbacks to doctors in order to steer more medicare dollars to its home health care unit. Another probe is trying to determine whether the company flouted an antiboycott law in order to get its name removed from an Arab League blacklist.

NANCIAL	JOHN A. ALLISON IV	NC	561	54	521	8/14/48	NC	BS, U. of N.C. '71	MBA, Duke '73	Banking	21	2	491
EARNS	ALAN C. GREENBERG	NY	2400	119	1500	9/3/27	KS	BA, U. of Mo. '49		Finance	42	13	5299
N INSTRUMENTS	LOUIS THOMAS ROSSO	CA	815	36	550	8/13/33	CA	AB, San Fran. State '55	MBA, Santa Clara '67	Tech/Mktg	33	3	431
, DICKINSON	RAYMOND V. GILMARTIN	NJ	2000	182	2600	3/6/41	DC	BS, Union '63	MBA, Harvard '68	Administration	15	3	729
LANTIC	RAYMOND W. SMITH	PA	12300	1300	19600	9/24/37	PA	BS, Carnegie-Mellon '59	MBA, U. of Pittsburgh '60	Finance	32	3	1284
UTH	JOHN L. CLENDENIN	GA	14300	1600	23600	5/8/34	TX	BA, Northwestern '55		Technical	36	8	1373
.H.)	ROBERT WILLIAM DECHERD	TX	439	30	582	4/9/51	TX	AB, Harvard '73		Administration	18	5	989
	JOHN H. ROE	MN	1100	51	889	12/21/39	MN	BA, Williams '62	MBA, Harvard '64	Marketing	27	1	515
IAL	FINN M. W. CASPERSEN	DE	1800	130	1600	10/27/41	NY	BA, Brown '63	LLB, Harvard '66	Legal	19	15	1301
BRUNSWIG	ROBERT E. MARTINI JR.	CA	4400	63	890	1/29/32	NJ	BS, Ohio State '54		Distribution	35	1	834
(W.R.)	WILLIAM ROBERT BERKLEY	CT	538	36	473	10/31/45	NJ	BA, NYU '66	MBA, Harvard '68	Finance/Ins	24	24	849
IRE HATHAWAY	WARREN EDWARD BUFFETT	NE	2700	394	10100	8/30/30	NE	BS, U. of Neb. '50	MS, Columbia '51	Finance	26	26	100
HEM STEEL	WALTER FRED WILLIAMS	PA	4900	−463	1400	2/7/29	PA	BS, U. of Del. '51		Production	40	6	679
BORATORIES	JOHN F. McCAUGHAN	PA	597	65	1700	6/24/35	Canada	AB, Sir Geo. Williams '57		Administration	31	10	567
ENTERPRISES	DAVID RUSSELL BANKS	AR	2100	13	686	2/15/37	WI	BS, U. of Ark. '59		Finance	22	2	559
MMUNICATIONS	HERBERT J. SIEGEL	NY	278	481	1600	5/7/28	PA	BA, Lehigh '50		Entrepreneur	14	14	NA
	JAMES LOUIS VINCENT	MA	50	8	903	12/15/39	PA	BS, Duke '61	MBA, Wharton '63	Mktg/Mgmt	6	6	704
	DANE ALAN MILLER	IN	210	39	1900	2/7/46	OH	BS, GMI '69	PhD, U. of Cincinnati '74	Technical	14	14	308
& DECKER	NOLAN D. ARCHIBALD	MD	4800	51	1100	6/22/43	UT	BS, Weber State '68	MBA, Harvard '70	Marketing	6	6	1392
	MURRAY K. McCOMAS	PA	478	38	420	12/3/36	PA	BS, Wharton '58		Marketing	29	4	389
(H&R)	HENRY W. BLOCH	MO	1200	140	3200	7/30/22	MO	BS, U. of Mich. '44		Management	45	37	790
DRUG	LEONARD N. BLOCK	NJ	513	53	963	12/21/11	NY	BS, U. of Pa. '33		Mktg/Finance	58	28	396
USTER ENTERTAINMENT	H. WAYNE HUIZENGA	FL	633	69	1800	12/29/37	IL	Calvin		Entrepreneur	4	4	398
FTWARE	MAX P. WATSON JR.	TX	130	26	1200	11/21/45	LA	BBA, La. Tech '68	U. of Ill.	Sales/Mktg	6	1	707
EN'S BANCSHARES	ANDREW B. CRAIG III	MO	1500	135	1700	3/20/31	NY	BA, U. of Buffalo '55		Finance	7	4	984
ANS FARMS	DANIEL E. EVANS	OH	501	34	590	8/24/36	OH	Ohio Wesleyan, Ohio St.		Operations	36	20	410
	FRANK SHRONTZ	WA	27600	1400	17100	12/14/31	ID	LLB, U. of Idaho '54	MBA, Harvard '58	Sales/Mgmt	33	5	1095
ASCADE	JOHN B. FERY	ID	4200	75	1000	2/16/30	WA	BA, U. of Wash. '53	MBA, Stanford '55	Prodn/Adm	35	19	694
N	ANTHONY S. D'AMATO	NY	7600	364	5300	6/22/30	NY	BS, Brooklyn Poly, '52	Northwestern	Technical	32	0	834
ND INTERNATIONAL	PHILIPPE KAHN	CA	227	27	822	3/16/52	France	U. of Zurich	MS, U. of Nice '78	Technical	8	8	1630
I EDISON	BERNARD W. REZNICEK	MA	1300	80	834	12/7/36	NE	BS, Creighton '58	MBA, U. of Neb. '79	Finance	4	1	493
ER	ANTHONY P. GAMMIE	CT	1400	87	979	12/17/34	England			Production	36	9	625
	VICTOR J. BARNHART	IL	384	11	443	11/30/42	PA	BS, Johns Hopkins '71	U. of Pittsburgh	Technical	1	1	NA
& STRATTON	FREDERICK PRESCOTT STRATTON JR.	WI	1000	35	548	3/25/39	WI	BS, Yale '61	MBA, Stanford '63	Finance	18	14	483
R INTERNATIONAL	NORMAN BRINKER	TX	347	18	778	6/2/31	CO	BS, San Diego State '57		Marketing	8	8	733

THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $MIL	PROFITS $MIL	MKT VAL $MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	P TH
BRISTOL-MYERS SQUIBB	RICHARD L. GELB	NY	10300	1700	45400	6/8/24	NY	BA, Yale '48	MBA, Harvard '50	Mktg/Finance	41	20	
BROAD	ELI BROAD	CA	818	33	411	6/6/33	NY	BA, Mich. State '54		Building	34	34	
BROOKLYN UNION GAS	ROBERT CATELL	NY	994	56	781	2/1/37	NY	BS, CCNY '58	MS, CCNY '64	Technical	33	0	
BROWN GROUP	B. A. BRIDGEWATER JR.	MO	1800	32	479	3/13/34	OK	AB, Westminster '55	LLB, U. of Okla. '58; MBA, Harvard '64	Administration	12	9	
BROWN-FORMAN	W. L. LYONS BROWN JR.	KY	1100	145	2100	8/22/36	KY	BA, U. of Va. '58	BS, American GSIM '60	Marketing	31	16	
BROWNING-FERRIS INDUSTRIES	WILLIAM DOYLE RUCKELSHAUS	TX	3000	257	3900	7/24/32	IN	BA, Princeton '57	LLB, Harvard '60	Legal/Govt	3	3	

EXECUTIVE TO WATCH

▶ Mr. Clean of the waste business is still having a tough time of it. Has seen profits at the garbage hauler tumble into the dumpster. His president quit, and former Chairman Harry J. Phillips is back to help clean up the mess. His CFO and general counsel abruptly resigned aft they sold half their company stock holdings just before the company released news that earnings would tumble. Was chief of the Environmental Protection Agency.

BRUNO'S	RONALD GREGORY BRUNO	AL	2400	60	1300	12/24/51	AL	BS, U. of Ala. '73		Marketing	18	1	
BRUNSWICK	JACK FRANK REICHERT	IL	2500	71	1200	9/27/30	WI	BA, Wis./Milwaukee '57		Marketing	34	9	
BURLINGTON NORTHERN	GERALD GRINSTEIN	TX	4700	222	2700	6/26/32	WA	BA, Yale '54	LLB, Harvard '57	Legal	4	3	
BURLINGTON RESOURCES	THOMAS HOWARD O'LEARY	WA	1900	208	5600	3/19/34	NY	BA, Holy Cross '54	MBA, Wharton '61	Finance	9	3	
C&S/SOVRAN	BENNETT A. BROWN	GA	5300	229	4000	6/1/29	SC	BS, Presbyterian '50		Finance	36	12	
CABLETRON SYSTEMS	STUART ROBERT LEVINE	NH	181	36	1300	1/29/58	MA	BS, U. of Miami '80		Marketing	9	9	
CABLEVISION SYSTEMS	CHARLES F. DOLAN	NY	563	−271	544	10/16/26	OH	John Carroll		Entrepreneur	18	6	
CABOT	SAMUEL W. BODMAN	MA	1482	40	557	11/26/38	IL	BS, Cornell '61	PhD, MIT '64	Tech/Finance	5	4	
CADENCE DESIGN SYSTEMS	JOSEPH BALL COSTELLO	CA	231	38	599	12/6/53	CT	BS, Harvey Mudd '74	MS, Yale '75	Technical	7	3	
CAESARS WORLD	HENRY GLUCK	CA	870	37	686	5/11/28	Germany	BS, Wharton '50		Management	9	9	
CALGON CARBON	THOMAS ARTHUR McCONOMY	PA	285	40	956	7/26/33	PA	BS, Carnegie-Mellon '55	Carnegie-Mellon	Tech/Mktg	36	6	
CALIFORNIA ENERGY	DAVID SOKOL	NE	95	12	462	9/8/56	NE	BS, U. of Neb. '78	U. of Neb.	Tech/Mgmt	1	1	
CALMAT	A. FREDERICK GERSTELL	CA	422	30	505	2/6/38	NY	AB, Princeton '60		Marketing	16	4	
CAMPBELL SOUP	DAVID WILLIS JOHNSON	NJ	6204	401	10700	8/7/32	Australia	BS, U. of Sydney '54	MBA, U. of Chicago '58	Marketing	2	2	
CAPITAL CITIES/ABC	DANIEL B. BURKE	NY	5400	478	7300	2/4/29	NY	BA, U. of Vt. '50	MBA, Harvard '55	Communs	30	1	
CAPITAL HOLDING	IRVING WIDMAR BAILEY II	KY	2600	166	2200	6/8/41	MA	BA, U. of Colo. '63	MBA, NYU '68	Finance	11	3	
CARDINAL DISTRIBUTION	ROBERT D. WALTER	OH	1200	17	669	7/13/45	OH	BSME, Ohio U. '67	MBA, Harvard '70	Administration	20	20	
CARNIVAL CRUISE LINES	MICKY ARISON	FL	1400	206	3000	6/29/49	Israel	U. of Miami		Marketing	17	12	
CAROLINA POWER & LIGHT	SHERWOOD H. SMITH JR.	NC	2600	280	3800	9/1/34	FL	AB, U. of N.C. '56	JD, U. of N.C. '60	Legal	26	12	
CARPENTER TECHNOLOGY	PAUL R. ROEDEL	PA	584	45	423	6/15/27	NJ	BS, Rider '48		Finance	43	11	
CARTER-WALLACE	HENRY H. HOYT JR.	NY	635	52	1300	8/10/27	NJ	AB, Princeton '49		Marketing	41	17	
CATELLUS DEVELOPMENT	VERNON BERNARD SCHWARTZ	CA	149	21	567	5/20/50	S. Africa	BC, Witwatersrand '72	MBA, Witwatersrand '74	Finance	2	2	
CATERPILLAR	DONALD V. FITES	IL	11400	210	4800	1/20/34	IN	BS, Valparaiso '56	MS, MIT '71	Marketing	35	1	
CBI INDUSTRIES	JOHN E. JONES	IL	1600	55	1300	6/24/34	MO	BS, Carleton '56	Chicago, Northwestern	Finance	12	2	
CBS	LAURENCE ALAN TISCH	NY	3300	92	2100	3/15/23	NY	BS, NYU '42	MA, U. of Pa. '43	Entrepreneur	5	5	

EXECUTIVE TO WATCH

▶ Having a bad year at the Tiffany network. Spent more than $2 billion for TV contracts with the National Football League and Major League Baseball. Cliff-hanger World Series was a ratings bonanza, and the net is now No. 1 in prime time. But return on investment has been down, because of an ad recession and a sports-programming glut. Took big write-offs (in all $604 million pretax) to cover future losses. Election coverage and Olympics may help in '9

CENTEL	JOHN P. FRAZEE JR.	IL	1100	47	2500	9/14/44	VA	BA, Randolph-Macon '66		Operations	20	4	
CENTERIOR ENERGY	RICHARD A. MILLER	OH	2400	326	2400	2/9/27	OH	BBA, Western Reserve '50	LLB, Harvard '53	Finance	31	3	
CENTEX	LAURENCE E. HIRSCH	TX	2200	44	533	12/19/45	NY	BS, Wharton '68	JD, Villanova '71	Legal	7	3	
CENTOCOR	JAMES E. WAVLE JR.	PA	65	−132	1200	7/19/42	NY	BA, Adelphi '64	JD, Georgetown '67; LLM, NYU '68	Legal	4	1	
CENTRAL & SOUTH WEST	E. RICHARD (DICK) BROOKS	TX	2700	386	4500	7/30/37	TX	BS, Tex. Tech. '61		Technical	30	2	
CENTRAL BANCSHARES OF THE SOUTH	DAVID PAUL JONES JR.	AL	513	49	534	9/26/42	AL	BS, U. of Ala. '64	JD, U. of Ala. '67; LLM, NYU '68	Fin/Legal	13	0	
CENTRAL FIDELITY BANKS	CARROLL L. SAINE	VA	605	56	653	9/14/34	NC	BA, Lenoir-Rhyne '54	MS, U. of Richmond '65	Finance	34	16	
CENTRAL HUDSON GAS & ELECTRIC	JOHN E. MACK III	NY	504	41	421	2/20/34	NY	BS, Siena '56	MBA, Siena '66	Finance/Ops	33	5	
CENTRAL LOUISIANA ELECTRIC	SCOTT O. BRAME	LA	334	43	480	6/12/28	LA	BS, La. State '49		Finance	42	3	
CENTRAL MAINE POWER	MATTHEW HUNTER	ME	766	49	560	4/12/33	RI	U. of Me.		Personnel	39	1	
CENTRAL NEWSPAPERS	FRANK E. RUSSELL	IN	432	28	477	12/6/20	IN	AB, Evansville '42	JD, Indiana '51	Finance/Legal	32	13	
CENTURY COMMUNICATIONS	LEONARD TOW	CT	277	−80	540	5/30/28	NY	AB, Brooklyn '50	MA '52/PhD '60, Columbia	Finance	18	18	
CENTURY TELEPHONE ENTERPRISES	CLARKE M. WILLIAMS SR.	LA	249	31	828	2/6/22	LA	BBA, Northeast La. '42		Management	23	0	

THE CORPORATE ELITE

	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY $ THOUS
	RONALD E. CAPE	CA	23	−62	510	10/11/32	Canada	BA, Princeton '53	MBA, Harvard '55; PhD, McGill '67	Research	20	0	379
ERS DEVELOPMENT	JOHN G. RANGOS SR.	PA	258	34	1600	7/27/29	OH	Houston Business		Entrepreneur	31	21	1548
ION INTERNATIONAL	ANDREW C. SIGLER	CT	5100	223	2400	9/25/31	NY	AB, Dartmouth '53	MBA, Amos Tuck '56	Marketing	34	17	1240
ING SHOPPES	DAVID V. WACHS	PA	886	40	1000	4/26/26	PA	BS, Wharton '48		Marketing	41	4	450
MANHATTAN	THOMAS G. LABRECQUE	NY	13700	−334	2700	9/17/38	NJ	BA, Villanova '60	American, NYU	Finance	27	1	680
AL BANKING	WALTER V. SHIPLEY	NY	8000	291	2400	11/2/35	NJ	BS, NYU '61		Banking	35	8	738
AL WASTE MANAGEMENT	JERRY E. DEMPSEY	IL	1100	176	3700	10/1/32	SC	BS, Clemson '54	MBA, Ga. State '67	Tech/Mkgt	7	5	659
EAKE	JOSEPH CARTER FOX	VA	841	17	409	9/8/39	VA	BS, Washington & Lee '61	MBA, U. of Va. '63	Fin/Planning	32	11	458
N	KENNETH TINDALL DERR	CA	38600	2200	25200	8/4/36	PA	BS, Cornell '59	MBA, Cornell '60	Management	31	3	1102
A BRANDS INTERNATIONAL	CARL HENRY LINDNER	OH	4300	94	2200	4/22/19	OH			Finance	15	15	400
	EDWARD E. PENHOET	CA	52	4	1100	12/11/40	CA	AB, Stanford '63	PhD, U. of Wash. '68	Research	10	10	336
RAFT INDUSTRIES	HERBERT J. SIEGEL	NY	298	292	676	5/7/28	PA	BA, Lehigh '50		Entrepreneur	31	31	8353
ER	LEE A. IACOCCA	MI	29800	68	2800	10/15/24	PA	BS, Lehigh '45	MSE, Princeton '46	Mktg/Sales	13	12	918
	DEAN RAYMOND O'HARE	NJ	4300	522	5700	6/21/42	NJ	BS, NYU '63	MBA, Pace '68	Finance	28	3	1159
& DWIGHT	DWIGHT C. MINTON	NJ	429	23	613	12/17/34	NY	BA, Yale '59	MBA, Stanford '61	Mktg/Finance	30	23	699
	WILSON H. TAYLOR	PA	18200	318	3000	11/17/43	CT	BS, Trinity '64		Finance	27	3	1283
	ROBERT O. VIETS	IL	537	41	425	12/8/43	KS	BA, Washburn '65	JD, Wash. U. (Mo.) '69	Finance	19	4	318
IATI BELL	DWIGHT H. HIBBARD	OH	1000	91	1100	7/27/23	MA	BA, Amherst '47; BSEE, MIT '49		Technical	27	7	764
IATI FINANCIAL	ROBERT B. MORGAN	OH	1000	129	1900	5/15/34	KY	AB, Eastern Ky. '54		Insurance	26	0	631
IATI GAS & ELECTRIC	JACKSON H. RANDOLPH	OH	1400	235	1900	11/17/30	OH	BBA, U. of Cincinnati '58	MBA, U. of Cincinnati '68	Finance	32	5	440
	RICHARD THIRL FARMER	OH	285	27	1100	11/22/34	KY	BA, Miami U. (Ohio) '56		Marketing	34	23	311
	CLIFFORD L. GREENWALT	IL	601	71	863	1/12/33	NM	BS, U. of Mo. '60	MBA, U. of Ill. '77	Technical	28	2	274
CITY STORES	RICHARD L. SHARP	VA	2400	57	1000	4/12/47	DC	U. of Va., William & Mary		Technical	9	5	656
CIRCUS ENTERPRISES	WILLIAM G. BENNETT	NV	692	76	2100	11/16/24	AZ	Phoenix Coll.		Mktg/Ops	17	17	998
YSTEMS	JOHN P. MORGRIDGE	CA	70	14	1300	7/23/33	IL	BBA, U. of Wis. '55	MBA, Stanford '57	Sales/Mktg	3	3	180
P	JOHN SHEPARD REED	NY	38400	318	5000	2/7/39	IL	BA, Wash. & Jefferson '61; BS, MIT '61	MS, MIT '65	Operations	26	7	1201
S UTILITIES	LEONARD TOW	CT	528	106	1500	5/30/28	NY	AB, Brooklyn '50	MA '52/PhD '60, Columbia	Finance/Mgmt	2	1	248
TIONAL	BRAM GOLDSMITH	CA	501	44	406	2/22/23	IL	U. of Ill.		Real estate	16	16	1026
QUIPMENT	LEO JOSEPH McKERNAN	IN	1400	50	419	2/17/38	PA	Iona, NYU, Bridgeport		Mktg/Prodn	17	5	722
N HOMES	JAMES L. CLAYTON	TN	260	20	532	3/2/34	TN	BS, U. of Tenn. '56	JD, U. of Tenn. '64	Marketing	31	31	486
	CHARLES R. WEAVER	CA	1500	154	2200	9/16/28	IN	BS, Purdue '50	U. of Pittsburgh	Marketing	38	6	870
ERGY	WILLIAM T. McCORMICK JR.	MI	3000	−482	1700	9/12/44	DC	BS, Cornell '66	PhD, MIT '69	Government	6	6	900
ANCIAL	EDWARD J. NOHA	IL	9900	367	5100	8/25/27	NY	BBA, Pace '51		Administration	17	17	2109
	JAMES ROBERT PAUL	TX	9400	226	3300	9/1/34	KS	BS, Wichita State '55		Finance	18	2	870
OLA	ROBERTO C. GOIZUETA	GA	10200	1400	43800	11/18/31	Cuba	BS, Yale '53		Technical	37	11	3142

EXECUTIVE TO WATCH

▶ His Coke is still top of the heap. Pouring lots of greenbacks into overseas business, which now makes up 80% of operating profits. With rival Pepsi already in the Soviet Union, he has struck a joint-venture deal with the independent-minded Ukrainians. Also covets potential Coke drinkers in Eastern Europe, where the company has opened several bottling plants. Is exploring opportunities in India. This internationalist is a fierce Atlanta booster, too.

OLA ENTERPRISES	BRIAN G. DYSON	GA	4000	93	1700	9/7/35	Argentina	BA,Ciencas Economicas '59		Finance/Ops	5	5	991
E-PALMOLIVE	REUBEN MARK	NY	5700	321	5500	1/21/39	NJ	AB, Middlebury '60	MBA, Harvard '63	Marketing	28	7	1554
AL	STEPHEN GARNER HALL	SC	306	33	451	10/5/46	MS	BS, Citadel '68	MBA, U. of Utah '71	Finance	18	1	388
BIA GAS SYSTEM	JOHN H. CROOM	DE	2400	105	908	12/12/32	NC	BS, N.C. State '54		Tech/Mktg	37	7	688
ST	BRIAN L. ROBERTS	PA	657	−178	1600	6/28/59	PA	BS, Wharton '81		Finance/Ops	15	2	270
CO	KENNETH N. PONTIKES	IL	1900	85	782	3/15/40	IL	BA, Southern Ill. '62		Marketing	22	22	1535
CA	EUGENE ALBERT MILLER	MI	1300	128	1300	9/21/37	MI	BBA, Detroit Tech '64		Finance	36	3	854
RCE BANCSHARES	DAVID W. KEMPER	MO	598	58	615	11/20/50	MO	BA, Harvard '72	MA, Oxford '74; MBA, Stanford '76	Finance/Bank	13	5	542
RCE CLEARING HOUSE	EDWARD LINDSEY MASSIE	IL	716	41	584	9/16/29	KY	BS, U. of Ky. '52		Sales	38	0	362
ONWEALTH EDISON	JAMES J. O'CONNOR	IL	5300	128	8400	3/15/37	IL	BS, Holy Cross '58	MBA, Harvard '60; JD, Georgetown '63	Administration	28	12	607
NICATIONS SATELLITE	IRVING GOLDSTEIN	DC	457	−16	611	3/27/38	NY	BA, Queens '60	JD, NYU '63	Legal/Mgmt	25	6	625
NITY PSYCHIATRIC CENTERS	JAMES W. CONTE	CA	374	83	1200	3/21/28	IL	BS, Roosevelt '49	MHS, Northwestern '57	Health care	23	14	1200
Q COMPUTER	ECKHARD PFEIFFER	TX	3600	455	3000	8/20/41	Germany		MBA, SMU, '83	Marketing	8	0	1336
TER ASSOCIATES INTL.	CHARLES B. WANG	NY	1300	159	1500	8/19/44	China	BS, Queens '67		Tech/Sales	15	15	2138
TER SCIENCES	WILLIAM RAY HOOVER	CA	1700	65	959	1/2/30	UT	BS, U. of Utah '53	MS, U. of Utah '54	Technical	28	19	870

THE CORPORATE ELITE

COMPANY	CEO	HDQ	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PA THIS
CONAGRA	CHARLES M. HARPER	NE	15500	232	6700	9/26/27	MI	BS Purdue '49	MBA U. of Chicago '50	Management	17	16	9
CONNER PERIPHERALS	FINIS F. CONNER	CA	1300	130	1300	7/28/43	AL	BS, San Jose State '69	Santa Clara	Marketing	6	6	14
CONRAIL	JAMES A. HAGEN	PA	3400	247	3000	3/27/32	IA	BA St. Ambrose '56	MA, Iowa State '58	Marketing	14	2	8
CONSECO	STEPHEN C. HILBERT	IN	751	42	422	1/23/46	IN	Indiana State		Insurance	12	12	21
CONSOLIDATED EDISON CO. OF N.Y.	EUGENE R. McGRATH	NY	5700	571	5800	2/14/42	NY	BSME Manhattan '63	MBA, Iona '80	Technical	28	1	6
CONSOLIDATED FREIGHTWAYS	DONALD E. MOFFITT	CA	4200	−28	573	5/22/32	IN	Indiana State		Finance	36	0	2
CONSOLIDATED NATURAL GAS	GEORGE A. DAVIDSON JR.	PA	2700	164	3600	7/28/38	PA	BS, U. of Pittsburgh '60		Operations	25	4	5
CONSOLIDATED PAPERS	GEORGE W. MEAD	WI	949	142	1800	10/11/27	WI	BS Yale '50	MS, Inst. Paper Chem. '52	Tech/Prodn	39	25	4
CONTEL CELLULAR	DENNIS L. WHIPPLE	GA	167	−103	1900	12/26/43	IA	BS Mankato State '68	MBA Mankato State '71	Marketing	1	1	
CONTINENTAL BANK	THOMAS C. THEOBALD	IL	3100	88	665	5/5/37	OH	AB Holy Cross '58	MBA, Harvard '60	Finance	4	4	8
CONTINENTAL CORP.	JOHN P. MASCOTTE	NY	5700	141	1400	5/19/39	IN	BS, St. Joseph's '61	LLB, U. of Va. '64	Insurance	11	9	
CONTINENTAL MEDICAL SYSTEMS	ROCCO A. ORTENZIO	PA	227	9	502	11/28/32	PA	BA, Westchester (Pa.) '55	Cert. U. of Pa. '56	Health care	6	5	11
COOPER INDUSTRIES	ROBERT CIZIK	TX	6200	361	6200	4/4/31	PA	BS, U. of Conn. '53	MBA, Harvard '58	Planning	30	16	13
COOPER TIRE & RUBBER	IVAN WILLIAM GORR	OH	896	66	1500	10/15/29	OH	BBA, U. of Toledo '51		Finance	19	2	6
COORS (ADOLPH)	WILLIAM K. COORS	CO	1900	39	744	8/11/16	CO	BS Princeton '38	MS, Princeton '39	Tech/Prodn	52	6	
CORDIS	ROBERT C. STRAUSS	FL	164	10	476	6/1/41	IL	BS, U of Ill '63	MS, U. of Idaho '65	Tech/Finance	8	5	9
CORESTATES FINANCIAL	TERRENCE A. LARSEN	PA	2600	114	2500	9/12/46	IL	BA, U. of Dallas '68	PhD, Tex. A&M '71	Finance	14	4	7
CORNING	JAMES R. HOUGHTON	NY	2900	289	6800	4/6/36	NY	AB Harvard '58	MBA, Harvard '62	Management	29	8	
COSTCO WHOLESALE	JAMES SINEGAL	WA	4100	49	3700	1/1/36	PA	San Diego State		Marketing	9	3	
COUNTRYWIDE CREDIT INDUSTRIES	DAVID S. LOEB	CA	208	22	575	1/19/24	NY	BS NYU '51		Finance	23	23	11
CPC INTERNATIONAL	CHARLES R. SHOEMATE	NJ	5800	374	7000	12/10/39	IL	BS, Western Ill. '62	MBA, U. of Chicago '73	Mktg/Finance	29	1	7
CPI	ALYN V. ESSMAN	MO	374	34	423	5/3/32	MO	BSBA, Wash. U. (Mo.) '53		Finance	35	18	8
CRACKER BARREL OLD COUNTRY	DAN EVINS	TN	226	15	867	10/11/35	TN	George Washington		Entrepreneur	21	2	8
CRANE	ROBERT SHELDON EVANS	NY	1400	63	845	3/20/44	PA	BA, U. of Pa. '66	MBA, Columbia '68	Finance	17	8	10
CRAWFORD	FORREST LEE MINIX	GA	449	32	998	11/6/27	GA	BS, U. of Ga. '49		Operations	42	4	
CRAY RESEARCH	JOHN A. ROLLWAGEN	MN	804	113	1200	11/20/40	MN	BS, MIT '62	MBA, Harvard '64	Marketing	16	11	9
CRESTAR FINANCIAL	RICHARD GRANVILLE TILGHMAN	VA	1300	61	722	9/18/40	VA	BA, U. of Va. '63		Finance	25	6	4
CRITICAL CARE AMERICA	PATRICK S. SMITH	MA	119	12	802	4/10/52	IL	BS, John Carroll '74	Loyola	Sales	10	10	2
CROMPTON & KNOWLES	VINCENT A. CALARCO	CT	390	30	742	5/29/42	NY	BS, Polytechnic U. '63	MBA, Harvard '70	Marketing	6	6	
CROSS (A.T.)	BRADFORD R. BOSS	RI	223	27	440	3/13/33	RI	BS, U. of R.I. '55		Marketing	33	12	5
CROWN CORK & SEAL	WILLIAM JOSEPH AVERY	PA	3100	107	2500	6/20/40	IL	U of Chicago		Mktg/Prodn	32	2	4
CSX	JOHN W. SNOW	VA	8200	365	5200	8/2/39	OH	BA, Kenyon '62	PhD, U. of Va. '65; LLB, Geo. Washington '67	Legal	14	2	9
CUC INTERNATIONAL	WALTER A. FORBES	CT	451	18	834	11/13/42	IL	BS Northwestern '61	MSJ, Northwestern '65; MBA, Harvard '68	Mktg/Invest	15	15	9
CUMMINS ENGINE	HENRY BREWER SCHACHT	IN	3500	−165	583	10/16/34	PA	BS, Yale '56	MBA, Harvard '62	Finance	27	18	4
CYPRESS SEMICONDUCTOR	T. J. RODGERS	CA	225	33	801	3/15/48	WI	AB, Dartmouth '70	MS '73/PhD '75, Stanford	Tech/Adm	9	9	
CYPRUS MINERALS	CHESTER B. STONE JR.	CO	1900	111	794	4/28/35	AR	BBA, U. of Houston '58		Finance	13	0	5
DANA	SOUTHWOOD J. MORCOTT	OH	5200	76	1200	4/12/38	GA	AB, Davidson '60	MBA, U. of Mich. '64	Mktg/Prodn	28	2	
DANAHER	GEORGE M. SHERMAN	DC	845	36	645	8/16/41	NY	BS, Long Island '63	MBA, Louisville '71	Administration	2	2	1
DATA GENERAL	RONALD L. SKATES	MA	1229	86	610	9/25/41	MO	AB, Harvard '63	MBA Harvard '65	Finance	5	2	8
DATASCOPE	LAWRENCE SAPER	NJ	120	9	463	9/8/28	NY	BS, CCNY '49		Technical	27	27	
DAUPHIN DEPOSIT	WILLIAM J. KING	PA	335	45	452	3/13/29	PA	BBA, U. of Pa. '71	MBA, LaSalle '79	Finance	12	5	
DAYTON HUDSON	KENNETH A. MACKE	MN	14700	410	5600	12/16/38	IA	BS, Drake '61		Marketing	30	8	1
DEAN FOODS	HOWARD M. DEAN	IL	2200	73	1300	6/27/37	IL	BBA SMU '60	MBA, Northwestern '61	Finance	26	4	
DEERE	HANS W. BECHERER	IL	7800	411	4000	4/19/35	MI	BA, Trinity '57	MBA, Harvard '62	Marketing	29	2	1
DELL COMPUTER	MICHAEL S. DELL	TX	546	27	764	2/23/65	TX	U. of Tex.		Prodn/Mktg	7	7	
DELMARVA POWER & LIGHT	NEVIUS M. CURTIS	DE	811	37	1000	8/16/29	MA	BA, Haverford '51	MBA, Stanford '56	Finance	13	10	
DELTA AIR LINES	RONALD W. ALLEN	GA	8600	303	2800	11/20/41	GA	BIE Ga. Tech '64		Personnel	28	4	
DELUXE	HAROLD V. HAVERTY	MN	1400	172	3900	5/17/30	MI			Production	38	5	
DESTEC ENERGY	ROBERT McFEDRIES	TX	412	70	1300	11/11/30	IL	BS, Purdue '52	MS, Purdue '56	Technical	1	1	
DETROIT EDISON	JOHN E. LOBBIA	MI	3300	514	4500	7/12/41	IL	BS, U. of Detroit '64		Mktg/Finance	27	1	
DEXTER	K. GRAHAME WALKER	CT	908	42	534	6/19/37	England	Br. Royal Navy Coll. '58	GI, Inst. Mech. Engrs. '62	Management	24	2	

EXECUTIVE TO WATCH

▶ Won kudos in the 80s for checking Japan's advance into the heavy-duty truck-engine market. But got blindsided by domestic rival Detroit Diesel and has lost a truckload of cash in recent years. Although slow to react at first, he has finally introduced an electronically controlled engine with whizbang features and fuel efficiency that will match Detroit Diesel's. He's also hitting the road to press the flesh with truckers and talk up the company.

For a second opinion on Windows, ask Baxter Healthcare Corp.

"The suite of applications for Windows is very rich."

"Our people are doing much better work. Better looking. Better crafted."

"As far as I was concerned, it was obvious: Windows is where it's going."

"It's just made it a lot easier to do a lot of things."

When Systems Manager Bob Cohen introduced the Microsoft® Windows™ operating system to Baxter Healthcare's Renal Division, the benefits quickly became apparent. Employees learned Windows applications with ease. And the quality of work improved dramatically. To get a free "Windows at Work" video, call (800) 541-1261, Dept. W34. And find out how Windows can help improve your company's health.

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THE CORPORATE ELITE

COMPANY	CEO	HDQ	SALES $MIL	PROFITS $MIL	MKT VAL $MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	P TH
DIAGNOSTEK	NUNZIO P. DeSANTIS	NM	220	7	436	3/24/51	Italy	BS, U. of N.M. '75		Technical	8	8	
DIAGNOSTIC PRODUCTS	SIGI ZIERING	CA	76	17	486	3/20/28	Germany	BS, Brooklyn '53	MA '55/PhD '57, Syracuse	Technical	18	17	
DIAL	JOHN W. TEETS	AZ	3500	116	1400	9/15/33	IL	Elgin CC		Management	28	10	2
DIAMOND SHAMROCK	ROGER R. HEMMINGHAUS	TX	2700	78	622	8/27/36	MO	BS, Auburn '58	Bettis, LSU	Technical	8	4	
DIEBOLD	ROBERT W. MAHONEY	OH	476	27	602	9/10/36	NY	BS, Villanova '58	MBA, Roosevelt '61	Marketing	9	6	
DIGITAL EQUIPMENT	KENNETH HARRY OLSEN	MA	13911	−617	7800	2/20/26	CT	BS, MIT '50	MS, MIT '52	Technical	34	34	

EXECUTIVE TO WATCH

▶ He's guiding DEC through a big transformation in culture and product pricing, after years disappointing earnings. Ending a long-standing tradition of no layoffs, he has announced plans to eliminate 20,000 jobs by mid-1992. The company sells more computers nowadays but at decidedly lower prices. After 34 years at the company, he shows no sign of letting up In his spare time, he flies plane to Maine getaway.

DILLARD DEPARTMENT STORES	WILLIAM THOMAS DILLARD	AR	3700	183	4900	9/2/14	AR	BSBA, U. of Ark. '35	MSBA, Columbia '37	Retailing	53	53	1
DISNEY (WALT)	MICHAEL DAMMANN EISNER	CA	5800	824	15400	3/7/42	NY	BA, Denison '64		Operations	7	7	11
DOLE FOOD	DAVID H. MURDOCK	CA	3000	120	2800	4/10/23	MO			Finance	6	6	1
DOMINION BANKSHARES	WARNER N. DALHOUSE	VA	1100	−37	489	6/4/34	VA	BS, U. of Va. '56		Marketing	35	10	
DOMINION RESOURCES	THOMAS E. CAPPS	VA	3500	504	5100	10/31/35	NC	BA, U. of N.C. '58	JD, U. of N.C. '66	Legal	7	1	
DONNELLEY (R.R.) & SONS	JOHN R. WALTER	IL	3500	226	3700	1/20/47	PA	BS, Miami U. (Ohio) '69		Sales	22	3	
DOVER	GARY L. ROUBOS	NY	2200	156	2300	11/7/36	CO	BS, U. of Colo. '59	MBA, Harvard '63	Mktg/Prodn	20	10	
DOW CHEMICAL	FRANK POPOFF	MI	19800	1400	14400	10/27/35	Bulgaria	BS, Indiana '57	MBA, Indiana '59	Marketing	32	4	
DOW JONES	PETER R. KANN	NY	1700	107	2700	12/13/42	NJ	BA, Harvard '64		Journalism	27	1	
DPL	PETER H. FORSTER	OH	955	163	1400	5/28/42	Germany	BS, U. of Wis. '64	JD, Brooklyn '72	Technical	18	7	
DQE	WESLEY W. VON SCHACK	PA	1100	136	1500	4/15/44	NY	AB, Fordham '65	MBA, St. John's '71; PhD, Pace '90	Finance/Adm	7	6	
DRESSER INDUSTRIES	JOHN JOSEPH MURPHY	TX	4500	174	2700	11/24/31	NY	BS, Rochester Tech '52	MBA, SMU '81	Tech/Prodn	39	8	
DREYER'S GRAND ICE CREAM	T.G. ROGERS	CA	308	12	425	6/5/42	CA	BS, Cal/Berkeley '63	MBA, Harvard '68	Finance	15	15	
DREYFUS	HOWARD M. STEIN	NY	261	62	1200	10/6/26	NY			Finance	36	26	
DUPONT	EDGAR S. WOOLARD JR.	DE	39700	2300	32400	4/15/34	NC	BS, N.C. State '56		Tech/Prodn	34	2	
DUKE POWER	WILLIAM STATES LEE	NC	3700	538	6100	6/23/29	NC	BS, Princeton '51		Technical	37	8	
DUN & BRADSTREET	CHARLES W. MORITZ	NY	4800	508	8000	8/22/36	DC	BA, Yale '58		Marketing	31	7	
DURR-FILLAUER MEDICAL	W. A. WILLIAMSON JR.	AL	815	17	396	1/25/36	AL	BS, U. of Ala. '58		Operations	33	18	
DUTY FREE INTERNATIONAL	JOHN A. COURI	CT	107	15	764	4/22/41	NY	BA, Syracuse '63		Marketing	9	5	
E-SYSTEMS	E. GENE KEIFFER	TX	1800	94	1200	8/25/29	TX	BS, SMU '55	MS, SMU '62	Technical	41	2	
EASTERN ENTERPRISES	ROBERT W. WEINIG	MA	950	64	521	8/3/30	OH	BA, Dartmouth '52	MBA, Amos Tuck '55	Finance	25	4	
EASTMAN KODAK	KAY R. WHITMORE	NY	18900	703	14000	7/24/32	UT	BS, U. of Utah '57	MS, MIT '75	Technical	34	1	
EATON	WILLIAM BUTLER	OH	3600	169	2200	3/10/31	IL	BS, U. of Ill. '56		Production	34	0	
ECHLIN	FREDERICK J. MANCHESKI	CT	1600	47	719	7/21/26	WI	BS, U. of Wis. '48		Production	29	22	
ECOLAB	PIERSON M. GRIEVE	MN	1400	54	721	12/5/27	MI	BA, Northwestern '50	U. of Minn.	Administration	9	9	
EDISON BROTHERS STORES	ANDREW E. NEWMAN	MO	1300	59	753	8/14/44	MO	AB, Harvard '66	MBA, Harvard '68	Marketing	21	4	
EDWARDS (A.G.)	BENJAMIN FRANKLIN EDWARDS III	MO	675	59	897	10/26/31	MO	BA, Princeton '53		Brokerage	35	24	
EG&G	JOHN M. KUCHARSKI	MA	2500	74	1200	2/10/36	WI	BS, Marquette '58	JD, Geo. Washington '65	Technical	19	4	
ELECTRONIC DATA SYSTEMS	LESTER M. ALBERTHAL JR.	TX	6000	497	5200	2/27/44	TX	BBA, U. of Tex. '68		Technical	23	5	
EMERSON ELECTRIC	CHARLES F. KNIGHT	MO	7600	613	11100	1/20/36	IL	BS, Cornell '58	MBA, Cornell '59	Consulting	19	18	
ENGELHARD	ORIN R. SMITH	NJ	2900	70	1500	8/13/35	NJ	AB, Brown '57	MBA, Seton Hall '64	Marketing	15	7	
ENRON	KENNETH LEE LAY	TX	13200	202	3300	4/15/42	MO	BA '64/MA '65, U. of Mo.	PhD, U. of Houston '70	Economics	7	7	
ENRON OIL & GAS	FORREST E. HOGLUND	TX	371	45	1800	7/1/33	KS	BS, U. of Kan. '56		Technical	4	4	
ENSERCH	WILLIAM C. McCORD	TX	2800	81	1100	4/1/28	TX	BS, Tex. A&M '49		Technical	42	21	
ENTERGY	EDWIN LUPBERGER	LA	4000	541	4500	6/5/36	GA	AB, Davidson '58	MBA, Emory '63	Finance	13	6	
ENTERRA	D. DALE WOOD	TX	144	18	438	7/27/38	TX	BBA, U. of Tex. '60		Finance	4	0	
EQUIFAX	C. B. ROGERS JR.	GA	1100	64	1500	10/24/29	NY	BA, Gettysburg '51	MBA, Geo. Washington '62	Marketing	4	2	
EQUITABLE RESOURCES	DONALD I. MORITZ	PA	659	59	800	10/23/27	PA	BS, U. of Pittsburgh '48	LLB, U. of Pittsburgh '51	Legal	39	13	
ETHYL	FLOYD DEWEY GOTTWALD JR.	VA	2500	232	3000	7/29/22	VA	BS, VMI '43	MS, U. of Richmond '51	Production	48	22	
EXABYTE	PETER D. BEHRENDT	CO	170	28	409	11/27/38	Germany	BS, UCLA '61		Technical	4	1	
EXXON	LAWRENCE G. RAWL	TX	105500	5000	72500	5/4/28	NJ	BS, U. of Okla. '52		Technical	39	5	
FAMILY DOLLAR STORES	LEON LEVINE	NC	874	29	702	6/8/37	NC	Wingate, U. of Miami		Marketing	32	32	
FEDERAL EXPRESS	FREDERICK WALLACE SMITH	TN	7000	116	2100	8/11/44	MS	BA, Yale '66		Transport	18	18	
FEDERAL HOME LOAN MORTGAGE	LELAND C. BRENDSEL	VA	4000	414	5700	4/22/42	SD	BS, U. of Colo. '67	PhD, Northwestern '74	Finance	9	6	
FEDERAL NATIONAL MORTGAGE	JAMES A. JOHNSON	DC	12700	1200	16700	12/24/43	MN	BA, U. of Minn. '65	MA, Princeton '68	Finance	2	1	
FEDERAL PAPER BOARD	JOHN R. KENNEDY	NJ	1400	118	1200	9/21/30	NY	BS, Georgetown '52		Marketing	39	24	

THE CORPORATE ELITE

	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY $ THOUS
SIGNAL	JOSEPH J. ROSS	IL	439	28	571	9/26/45	IL	BA, St. Mary's '67	JD, DePaul '69	Legal	8	4	485
	ALBERT CHARLES BERSTICKER	OH	1100	19	549	3/22/34	OH	BA, Miami U. (Ohio) '56	MS, Miami U. (Ohio) '58	Management	33	0	345
RNATIONAL	WESTCOTT WILKEN PRICE III	CA	980	29	518	5/6/39	CA	BS, U. of Colo. '61	MBA, USC '67	Management	10	1	408
IRD BANCORP	GEORGE A. SCHAEFER JR.	OH	834	120	2400	5/17/45	OH	BS, U.S. Mil. Acad. '67	MBA, Xavier '74	Banking	20	1	514
NTERNATIONAL	HARRY E. FIGGIE JR.	OH	1400	40	410	10/28/23	OH	BS '47/MA '53, Case Tech	MBA, Harvard '49; JD, Clev. Marshall '54	Sales/Prodn	28	28	1636
	RONALD WAYNE HADDOCK	TX	4000	126	1100	7/29/40	IL	BS, Purdue '63		Technical	5	3	1353
UT	THEODORE DEIKEL	MN	1200	48	680	10/5/35	MN	U. of Minn.		Marketing	2	2	1114
ABAMA BANCSHARES	JAMES STANLEY MACKIN	AL	612	69	908	7/30/32	AL	BS, Auburn '54		Banking	25	1	446
NK SYSTEM	JOHN F. GRUNDHOFER	MN	2100	131	1700	1/1/39	CA	BA, Loyola '60	MBA, USC '64	Finance	2	2	1572
ANDS	ALFRED E. DUDLEY	CT	1100	50	714	9/12/28	OH	BS, Bowling Green '51		Mktg/Prodn	5	5	595
ICAGO	BARRY F. SULLIVAN	IL	5700	249	1800	12/21/30	NY	BA, Columbia '55	MBA, U. of Chicago '57	Banking	11	11	736
PIRE STATE	ROBERT G. WILMERS	NY	713	54	642	4/20/34	NY	AB, Harvard '56	Harvard	Banking	9	8	489
ELITY BANCORPORATION	ANTHONY P. TERRACCIANO	NJ	3100	−6	2000	10/27/38	NJ	AB, St. Peter's '60	MA, Fordham '62	Banking	2	2	826
IANCIAL MANAGEMENT	PATRICK H. THOMAS	GA	1300	73	1200	8/29/42	GA	BS, Ga. State '60	MBA, Ga. State '61	Banking/Tech	20	17	2506
WAIIAN	WALTER ARTHUR DODS JR.	HI	541	71	898	5/26/41	HI	BBA, Hawaii/Manoa '68		Marketing	23	2	848
TERSTATE BANCORP	EDWARD M. CARSON	CA	6000	439	2100	11/6/29	AZ	BA, Ariz. State '51		Finance	40	1	909
AMERICA BANK	DANIEL R. SMITH	MI	1400	132	1100	3/19/34	MI	BBA, Western Mich. '55	Northwestern	Finance	36	6	917
CURITY	SPENCER FOX ECCLES	UT	703	46	559	8/24/34	UT	BS, U. of Utah '56	MBA, Columbia '59	Finance	31	10	455
NESSEE NATIONAL	RONALD A. TERRY	TN	740	48	608	12/5/30	TN	BS, Memphis State '52		Banking	34	18	493
ION	EDWARD E. CRUTCHFIELD JR.	NC	4100	304	3000	7/14/41	MI	AB, Davidson '63	MBA, Wharton '65	Finance	26	7	600
RGINIA BANKS	ROBERT H. ZALOKAR	VA	570	65	715	5/25/27	KS	BS, U. of Kan. '50		Finance	36	7	604
	ROGER L. FITZSIMONDS	WI	976	98	1300	5/21/38	WI	BBA, U. of Wis. '60	MBA, U. of Wis. '71	Finance	27	1	560
	GEORGE D. DALTON	WI	183	14	444	3/3/28	IL	Northwestern		Finance/Tech	30	8	314
ORSTAR FINANCIAL GROUP	TERRENCE MURRAY	RI	4000	−74	2800	7/11/39	RI	BA, Harvard '62		Finance	29	3	756
OD ENTERPRISES	JOHN C. CREAN	CA	1400	30	728	7/4/25	ND			Prod design	41	41	479
	E. DEAN WERRIES	OK	11900	97	1300	5/8/29	KS	BS, U. of Kan. '52		Mktg/Ops	37	3	683
FETY INTERNATIONAL	ALBERT LEE UELTSCHI	NY	273	76	1700	5/15/17	KY			Training	40	40	367
PROGRESS	JACK B. CRITCHFIELD	FL	2000	197	2200	5/23/33	PA	BS, Slippery Rock '55	MA '60/EdD '67, U. of Pittsburgh	Management	8	2	511
INDUSTRIES	AMOS RYALS McMULLIAN	GA	835	34	534	8/28/37	FL	BS, Fla. State '62	Fla. State	Finance	29	10	382
	LESLIE G. McCRAW	CA	7400	139	3600	11/3/34	SC	BS, Clemson '56		Technical	5	2	899
	ROBERT N. BURT	IL	3700	155	1700	5/24/37	OH	BS, Princeton '59	MBA, Harvard '64	Planning/Mgmt	39	1	488
D	ROBERT N. BURT	IL	153	39	450	5/24/37	OH	BS, Princeton '59	MBA, Harvard '64	Planning/Mgmt	2	2	NA
ON	TOM E. SMITH	NC	5600	173	5800	5/2/41	NC	AB, Catawba '64		Retailing	21	6	794
TOR	HAROLD A. POLING	MI	97700	860	14700	10/14/25	MI	BA, Monmouth '49	MBA, Indiana '51	Finance	41	2	1221

EXECUTIVE TO WATCH

▶ This cost-cutter is coping with a withering auto recession. The No. 2 carmaker has lost $1.78 billion in the first nine months of 1991. The downturn has dampened sales of the Ford Probe, Mercury Cougar, and light trucks. Took Taurus in for a face-lift. "Red" has troubles in Europe, too, where a sluggish British economy is dragging down sales, and the new charge, Jaguar, needs an overhaul. He's popular with the Ford clan, though, for promoting members.

ABORATORIES	HOWARD SOLOMON	NY	176	38	1400	8/12/27	NY	BS, CCNY '49	LLB, Yale '52	Legal	16	15	401
VHEELER	LOUIS E. AZZATO	NJ	1700	38	1000	10/8/30	NY	BS, CCNY '52		Technical	39	10	1022
JP	JAMES L. BROADHEAD	FL	6300	−347	5300	11/28/35	NY	BME, Cornell '58	LLB, Columbia '63	Management	3	3	867
N RESOURCES	CHARLES B. JOHNSON	CA	288	89	1500	1/6/33	NJ	BA, Yale '54		Finance	34	20	480
F-McMORAN	JAMES R. MOFFETT	LA	1600	314	2700	8/16/38	LA	BS, U. of Tex. '61	MS, Tulane '63	Technical	24	7	2011
F-McMOR. COPPER & GOLD	MILTON HAWKINS WARD	LA	434	93	2800	8/1/32	AL	BS '55/MS '81, U. of Ala.	MBA, U. of N M. '74	Tech/Mgmt	17	6	NA
THE LOOM	WILLIAM FARLEY	IL	1400	77	1300	10/10/42	RI	AB, Bowdoin '64	JD, Boston Coll. '69	Finance	6	6	NA
H. B.)	ANTHONY L. ANDERSEN	MN	792	21	386	12/10/35	MN	BS, Macalester '57		Sales/Mgmt	34	17	543
ERICAN	JOHN J. BYRNE	VT	257	129	1400	7/11/32	NJ	BS, Rutgers '54	MS, U. of Mich '59	Fin/Insurance	6	6	3369
ETT	JOHN J. CURLEY	VA	3400	377	6600	12/31/38	PA	BA, Dickinson '60	MS, Columbia '63	Journalism	22	5	1300
)	DONALD GEORGE FISHER	CA	1900	145	6200	9/3/28	CA	BS, Cal/Berkeley '50		Real estate	22	22	1876
	JAMES J. GLASSER	IL	870	83	763	6/5/34	IL	AB, Yale '55	JD, Harvard '58	Legal/Mgmt	30	13	780
	WILLIAM BURTON SNYDER	DC	1900	208	2800	7/9/29	WV	BS, Tex. Tech '55		Marketing	14	6	992
CH	G. KIRK RAAB	CA	435	−98	3100	9/27/35	NY	AB, Colgate '59		Marketing	7	2	675
CINEMA	RICHARD ALAN SMITH	MA	2200	111	1600	11/1/24	MA	BS, Harvard '46		Management	44	30	1233

THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC.	SALES $MIL	PROFITS $MIL	MKT VAL $MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO
GENERAL DYNAMICS	WILLIAM A. ANDERS	MO	10200	−639	1800	10/17/33	Hong Kong	BS, U.S. Naval Acad. '55	MS, USAF '62	Technical	1	1

EXECUTIVE TO WATCH

▶ The cold war is history as is growth in defense spending. So this onetime fighter pilot and astronaut has cut the defense contractor's work force by 13% this year and slashed researc and development spending as well. Although still committed to defense, he plans to pursue less risky contracts. Has taken plenty of hostile fire from critics over management bonuses th were tied to the company's stock performance.

GENERAL ELECTRIC	JOHN FRANCIS WELCH	CT	57700	4300	65200	11/19/35	MA	BS, U. of Mass. '57	MS '58/PhD '60, U. of Ill.	Technical	31	10
GENERAL MILLS	H. B. (BRUCE) ATWATER JR.	MN	7200	464	10600	4/19/31	MN	AB, Princeton '52	MBA, Stanford '54	Marketing	33	10
GENERAL MOTORS	ROBERT C. STEMPEL	MI	123300	−1986	23500	7/15/33	NJ	BS, Worcester Poly '55	MBA, Mich. State '70	Technical	34	1
GENERAL PUBLIC UTILITIES	WILLIAM G. KUHNS	NJ	3000	314	2900	4/26/22	WI	BA, U. of Wis. '46	JD, U. of Wis. '49	Fin/Legal	36	22
GENERAL RE	RONALD E. FERGUSON	CT	3000	614	7700	1/16/42	IL	BA, Blackburn '63	MS, U. of Mich. '65	Insurance	22	5
GENERAL SIGNAL	EDMUND M. CARPENTER	CT	1700	−13	874	12/28/41	OH	BS, U. of Mich. '63	MBA, U. of Mich. '64	Technical	3	3
GENETICS INSTITUTE	GABRIEL SCHMERGEL	MA	40	−25	524	5/14/40	Hungary	BSME, RPI '62	MBA, Harvard '67	Management	10	10
GENSIA PHARMACEUTICALS	DAVID F. HALE	CA	0	−14	476	1/8/49	AL	BA, Jacksonville '70		Sales/Mktg	4	4
GENUINE PARTS	LARRY L. PRINCE	GA	3300	207	3200	10/4/38	TN	Memphis State		Mktg/Ops	33	2
GENZYME	HENRI A. TERMEER	MA	50	−27	680	2/28/46	Holland	U. of Rotterdam	MBA, U. of Va. '73	Management	8	6
GEORGIA GULF	JERRY R. SATRUM	GA	932	95	729	11/6/44	OR	BS, Ore. State '68		Finance	7	1
GEORGIA-PACIFIC	THOMAS MARSHALL HAHN JR.	GA	12700	365	4900	12/2/26	KY	BS, U. of Ky. '45	PhD, MIT '50	Tech/Educ	17	8
GERBER PRODUCTS	ALFRED A. PIERGALLINI	MI	1200	113	2400	8/1/46	PA	BA, Lafayette '68	MBA, U. of Chicago '70	Marketing	2	2
GIANT FOOD	ISRAEL COHEN	MD	3400	119	1400	11/21/12	Palestine			Operations	55	14
GILLETTE	ALFRED M. ZEIEN	MA	4300	368	9600	2/25/30	NY	BS, Webb '52	MBA, Harvard '55	Technical	23	1
GLATFELTER (P. H.)	THOMAS C. NORRIS	PA	625	88	1300	5/9/38	PA	BA, Gettysburg '60		Finance	31	11
GLOBAL MARINE	CHARLES RUSSELL LUIGS	TX	282	−36	452	4/4/33	IN	BS, U. of Tex. '57		Marketing	14	14
GM HUGHES ELECTRONICS	ROBERT J. SCHULTZ	MI	11600	726	1300	5/22/30	MI	BS, Mich. State '53	MBA, Mich. State '69	Technical	36	3
GOLDEN WEST FINANCIAL	HERBERT M. SANDLER	CA	2100	181	2600	11/16/31	NY	BS, CCNY '51	JD, Columbia '54	Legal	28	28
GOODRICH (B. F.)	JOHN D. ONG	OH	2400	116	1100	9/29/33	OH	BA/MA, Ohio State '54	LLB, Harvard '57	Legal	30	12
GOODYEAR TIRE & RUBBER	STANLEY C. GAULT	OH	11300	−38	2200	1/6/26	OH	BS, Wooster '48		Marketing	0	0
GOULDS PUMPS	STEPHEN VINCENT ARDIA	NY	555	31	454	8/3/41	NJ	BS, M. Marine Acad. '63	MBA, Rutgers '70	Sales	26	6
GRACE (W. R.)	J. PETER GRACE	NY	6800	203	3300	5/25/13	NY	BA, Yale '36		Finance	55	46
GRACE ENERGY	J. PETER GRACE	TX	480	22	412	5/25/13	NY	BA, Yale '36		Finance	55	46
GRAINGER (W. W.)	DAVID WILLIAM GRAINGER	IL	1900	127	2500	10/23/27	IL	BS, U. of Wis. '50		Administration	40	24
GREAT ATLANTIC & PACIFIC TEA	JAMES WOOD	NJ	11400	151	1500	1/19/30	England	CB, Loughborough '55		Operations	11	11
GREAT LAKES CHEMICAL	EMERSON KAMPEN	IN	1100	141	3000	3/12/28	MI	BS, U. of Mich. '51		Mktg/Prodn	40	14
GREAT WESTERN FINANCIAL	JAMES F. MONTGOMERY	CA	4200	193	2400	11/30/34	KS	BS, UCLA '57		Finance	31	12
GREEN TREE ACCEPTANCE	LAWRENCE M. COSS	MN	176	37	445	11/5/38	SD			Finance	16	16
GREIF BROS.	JOHN C. DEMPSEY	OH	438	22	399	7/14/14	OH	John Carroll		Finance/Prodn	45	44
GRUMMAN	RENSO L. CAPORALI	NY	4000	86	612	4/12/33	NY	BCE '54/MME '60, Clarkson	MAE '62/MA '63/ PhD '64, Princeton	Technical	32	1
GTE	JAMES L. JOHNSON	CT	18400	1500	26500	4/12/27	TX	BA, Tex. Tech '49		Finance	42	4
GULF STATES UTILITIES	E. LINN DRAPER JR.	TX	1700	−44	1100	2/6/42	TX	BA '64/BS '65, Rice	PhD, Cornell '70	Technical	13	5
HALLIBURTON	THOMAS H. CRUIKSHANK	TX	6900	197	4200	11/3/31	LA	BA, Rice '52	U. of Tex., U. of Houston	Finance/Legal	22	8
HANCOCK FABRICS	MORRIS O. JARVIS	MS	387	28	490	11/20/40	MS		Ky. Mortuary Science	Marketing	23	4
HANDLEMAN	STEPHEN STROME	MI	703	23	528	6/20/45	MA	BA, Hillsdale '67	MBA, Wayne State '68	Sales/Adm	13	0
HANNA (M. A.)	MARTIN D. WALKER	OH	1100	56	673	6/25/32	IN	BS, GMI '54	MBA, Mich. State '70	Production	5	5
HANNAFORD BROTHERS	JAMES LEANDER MOODY JR.	ME	1700	42	854	11/23/31	NH	AB, Bates '53		Mktg/Finance	32	19
HANOVER INSURANCE	WILLIAM J. O'BRIEN	MA	1700	53	609	11/18/32	NY	BS, Fordham '54	Seton Hall	Insurance	20	12
HARLAND (JOHN H.)	ROBERT R. WOODSON	GA	371	57	843	4/18/32	GA	BS, U. of Ga. '58		Finance	27	1
HARLEY-DAVIDSON	RICHARD F. TEERLINK	WI	865	38	918	10/12/36	IL	BS, Bradley '61	MBA, U. of Chicago '76	Finance	10	3
HARNISCHFEGER INDUSTRIES	WILLIAM W. GOESSEL	WI	1800	70	625	10/24/27	WI	BA, Carthage '50		Production	9	6
HARRIS	JOHN THOMAS HARTLEY	FL	3100	131	924	3/4/30	FL	BS '51/BSEE '55, Auburn	Auburn	Technical	35	5
HARSCO	MALCOLM W. GAMBILL	PA	1800	73	769	6/9/30	NC	BE Yale '53		Production	36	4
HARTFORD STEAM BOILER INSPECT.	WILSON WILDE	CT	562	79	1100	9/24/27	CT	AB, Williams '49		Insurance	38	20
HASBRO	ALAN G. HASSENFELD	RI	1500	89	1500	11/16/48	RI	BA, U. of Pa. '70		Production	21	2
HAWAIIAN ELECTRIC INDUSTRIES	ROBERT F. CLARKE	HI	1000	51	794	4/13/42	CA	BA, Cal/Berkeley '65	MBA, Cal/Berkeley '66	Finance	5	1
HEALTH CARE PROPERTY INVESTORS	KENNETH B. ROATH	CA	72	23	455	12/17/35	CA	BS, San Diego State '63		Finance	7	7
HEALTHCARE COMPARE	JAMES C. SMITH	IL	42	6	656	2/28/41	MA	BA, Northeastern '63		Marketing	8	8
HEALTHSOUTH REHABILITATION	RICHARD M. SCRUSHY	AL	180	13	450	Age 39	AL	Cert., U. of Ala./ Birmingham '74		Sales/Cp dev	2	2
HECHINGER	JOHN W. HECHINGER JR.	MD	1400	23	539	2/9/50	DC	BS, Boston U. '72		Operations	19	2

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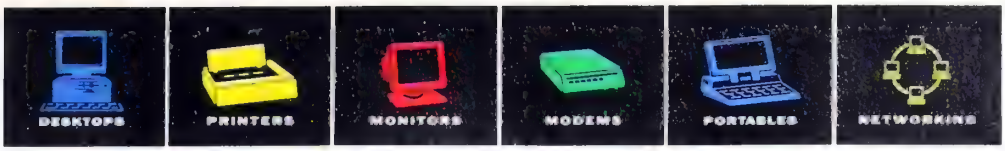
THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL. $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PA TH
HEILIG-MEYERS	WILLIAM DeRUSHA	VA	448	21	413	1/10/50	VA	BS, Va. Commonwealth '75		Mktg/Finance	22	7	
HEINZ (H.J.)	ANTHONY J.F. O'REILLY	PA	6600	568	11600	5/7/36	Ireland	BC Law, U. Coll. Dublin	PhD, U. of Bradford '80	Mktg/Legal	22	12	
HELMERICH & PAYNE	HANS CHRISTIAN HELMERICH	OK	199	48	600	9/4/58	OK	BS, Dartmouth '81		Management	10	2	
HENLEY GROUP	MICHAEL DAVID DINGMAN	NH	1900	–101	555	9/29/31	CT	U. of Md.		Management	22	22	
HERCULES	THOMAS L. GOSSAGE	DE	3200	96	1900	5/7/34	TN	BS, Ga. Tech. '56	MS, Ga. Tech. '57	Technical	4	1	
HERSHEY FOODS	RICHARD A. ZIMMERMAN	PA	2700	216	3800	4/6/32	PA	BA, Penn State '53		Production	33	7	
HEWLETT-PACKARD	JOHN A. YOUNG	CA	13200	739	13200	4/24/32	ID	BS, Ore. State '53	MBA, Stanford '58	Tech/Mgmt	33	13	
HILLENBRAND INDUSTRIES	W AUGUST HILLENBRAND	IN	1100	76	1700	9/18/40	IN	BS, St. Joseph's '65		Mktg/Prodn	31	2	
HILTON HOTELS	BARRON HILTON	CA	1100	113	1900	10/23/27	TX			Management	40	26	
HOLNAM	MARC R. von WYSS	MI	1100	–28	573	2/12/31	Switz.	Zurich	Dip., Fed. Inst. Tech '56	Tech/Mgmt	20	20	
HOME BENEFICIAL	RICHARD WATKINS WILTSHIRE	VA	239	67	411	7/17/21	VA	BA, U. of Va. '43		Marketing	44	23	
HOME DEPOT	BERNARD MARCUS	GA	3800	163	10300	5/12/29	NJ	BS, Rutgers '54		Marketing	13	13	
HOME SHOPPING NETWORK	ROY M. SPEER	FL	1000	32	567	6/23/32	FL	BA, SMU '56	JD, Stetson '59	Operations	6	6	
HOMESTAKE MINING	HARRY M. CONGER	CA	482	–19	1500	7/22/30	WA	BS, Colorado Mines '55		Technical	16	13	
HON INDUSTRIES	STANLEY M. HOWE	IA	664	43	534	2/5/24	IA	BS, Iowa State '46	MBA, Harvard '48	Production	44	12	
HONEYWELL	JAMES J. RENIER	MN	6300	372	4000	1/9/30	MN	BS, St. Thomas '51	PhD, Iowa State '55	Tech/Prodn	35	4	
HORMEL (GEO. A.)	RICHARD L. KNOWLTON	MN	2700	77	1600	6/9/32	MN	BA, U. of Colo. '54		Mktg/Prodn	37	10	
HOUSEHOLD INTERNATIONAL	DONALD CAMERON CLARK	IL	4300	235	2200	8/9/31	NY	BBA, Clarkson '53	MBA, Northwestern '61	Finance	36	9	
HOUSTON INDUSTRIES	DON D. JORDAN	TX	4200	387	4800	5/9/32	TX	BBA, U. of Tex. '54	JD, South Tex. '69	Mktg/Adm	35	14	
HUBBELL	G. JACKSON RATCLIFFE	CT	720	86	1600	3/22/36	WV	AB, Duke '58	JD, U. of Va. '61	Finance	17	4	
HUMANA	DAVID A. JONES	KY	4900	318	5100	8/7/31	KY	BS, Louisville '54	JD, Yale '60	Entrepreneur	30	30	
HUNT (J.B.) TRANSPORT SERVICES	JAMES KIRK THOMPSON	AR	580	30	543	7/28/53	AR	BSBA, U. of Ark. '78		Finance	18	5	
HUNTINGTON BANCSHARES	FRANK G. WOBST	OH	1300	85	1200	11/14/33	Germany	U. of Erlangen '55	Masters, Goettingen '58	Finance/Bank	17	11	
IBP	ROBERT L. PETERSON	NE	10200	48	929	7/14/32	NE	U. of Neb.		Production	30	12	
IDAHO POWER	JOSEPH W. MARSHALL	ID	465	69	900	9/21/38	ID	BS, U.S. Naval Acad. '61		Technical	22	2	
IES INDUSTRIES	LEE LIU	IA	454	61	419	3/30/33	China	BS, Iowa State '57		Technical	34	8	
ILLINOIS CENTRAL	EDWARD L. MOYERS	IL	544	46	666	10/2/28	MS	BS, La. Tech '55		Operations	36	3	
ILLINOIS POWER	LARRY D. HAAB	IL	1400	–78	1600	9/28/37	IL	BS, Millikin '59		Finance	26	0	
ILLINOIS TOOL WORKS	JOHN D. NICHOLS	IL	2500	182	3500	9/20/30	China	BA, Harvard '53	MBA, Harvard '55	Production	12	10	
IMC FERTILIZER GROUP	BILLIE B. TURNER	IL	1100	83	1400	12/31/30	TX	BS, Tex. A&M '51		Marketing	37	4	
IMCERA GROUP	M. BLAKE INGEL	IL	1400	59	2500	Age 49	NM	BS, Fort Lewis '64	MA '66/PhD '68, Colo. St.	R&D	11	0	
IMMUNEX	STEPHEN A. DUZAN	WA	31	–10	643	5/9/41	OR	U. of Wash.		Mgmt/Cp dev	10	1	
INB FINANCIAL	THOMAS MILTON MILLER	IN	657	41	571	3/2/30	IN	BS, Indiana '52	Cert., U. of Wis. GSB '61	Finance	37	10	
INFORMATION RESOURCES	GIAN MARK FULGONI	IL	167	5	490	1/24/48	U.K.	BS, U. of Manchester '69	MA, U. of Lancaster '70	Marketing	11	6	
INGERSOLL-RAND	THEODORE H. BLACK	NJ	3700	185	2500	10/22/28	NJ	BS, U.S. Naval Acad. '53		Mktg/Prodn	34	3	
INLAND STEEL INDUSTRIES	FRANK W. LUERSSEN	IL	3900	–21	681	8/14/27	PA	BS, Penn State '50	MS, Lehigh '51	Research	39	9	
INTEGRA FINANCIAL	WILLIAM F. ROEMER	PA	740	26	605	9/21/33	OH	BA, Princeton '55		Banking	22	13	
INTEL	ANDREW S. GROVE	CA	3900	650	10000	9/2/36	Hungary	BS, CCNY '60	PhD, Cal/Berkeley '63	Technical	23	4	
INTERGRAPH	JAMES W. MEADLOCK	AL	1000	63	943	12/19/33	NC	BS, N.C. State '56		Technical	23	2	
INTERNATIONAL BUSINESS MACHINES	JOHN F. AKERS	NY	69000	6000	55500	12/28/34	MA	BS, Yale '56		Mktg/Adm	31	7	
INTERNATIONAL DAIRY QUEEN	MICHAEL P. SULLIVAN	MN	282	27	472	12/5/34	MN	BS, Marquette '56	JD, U. of Minn. '62	Legal	17	4	
INTL. FLAVORS & FRAGRANCES	EUGENE P. GRISANTI	NY	963	157	3200	10/24/29	NY	AB, Holy Cross '51	LLB, Boston U. '53; LLM, Harvard '54	Legal	31	6	
INTERNATIONAL GAME TECHNOLOGY	CHARLES N. MATHEWSON	NV	210	20	775	6/12/28	CA	BS, USC '53		Finance	6	5	
INTERNATIONAL MULTIFOODS	ANTHONY LUISO	MN	2200	35	576	1/6/44	Italy	BS, Iona '67	MBA, U. of Chicago '82	Finance/Prodn	5	2	
INTERNATIONAL PAPER	JOHN A. GEORGES	NY	13000	569	7700	2/24/31	TX	BS, U. of Ill. '51	MBA, Drexel '57	Technical	12	7	
INTERPUBLIC GROUP	PHILIP HENRY GEIER JR.	NY	1300	80	1800	2/22/35	MI	BA, Colgate '57	MS, Columbia '58	Marketing	33	12	
IOWA-ILLINOIS GAS & ELECTRIC	STANLEY J. BRIGHT	IA	485	55	678	4/21/40	NY	BBA, Geo. Washington '63		Finance	5	0	
IPALCO ENTERPRISES	JOHN RAYMOND HODOWAL	IN	611	102	1100	2/16/45	OH	BS, Purdue '66	JD, Indiana '70	Fin/Legal	23	2	
ITEL	SAMUEL ZELL	IL	2000	–33	600	9/28/41	IL	BS, U. of Mich. '63	JD, U. of Mich. '66	Real estate	7	6	
ITT	RAND V. ARASKOG	NY	20600	1100	6900	10/30/31	MN	BS, U.S. Mil. Acad. '53	Harvard	Mktg/Prodn	25	12	
IVAX	PHILLIP FROST	FL	142	–1	1000	11/11/36	PA	AB, U. of Pa. '57	MD, Albert Einstein '61	Technical	4	4	
JACOBS ENGINEERING GROUP	JOSEPH J. JACOBS	CA	882	14	620	6/13/16	NY	BS, Polytechnic U. '37	MS '39/PhD '42, Polytechnic	Technical	44	17	
JAMES RIVER CORP. OF VIRGINIA	ROBERT C. WILLIAMS	VA	5400	78	1900	1/24/30	OH	ME, U. of Cincinnati '53	MBA, Xavier '57	Technical	32	1	
JEFFERSON-PILOT	WILLIAM ROGER SOLES	NC	1200	158	1700	9/16/20	NC	BS, U. of N.C. '47		Finance	45	24	
JOHNSON & JOHNSON	RALPH S. LARSEN	NJ	11200	1100	30900	11/19/38	NY	BS, Hofstra '62		Prodn/Mktg	29	2	
JOHNSON CONTROLS	JAMES H. KEYES	WI	4500	92	1300	9/2/40	WI	BS, Marquette '62	MBA, Northwestern '63	Finance	25	4	
JOSTENS	H. WILLIAM LURTON	MN	788	60	1400	9/18/29	CT	BA, Principia '51		Ops/Sales	36	20	
JWP	ANDREW T. DWYER	NY	2800	59	668	7/15/48	NJ	BA, Yale '71	JD, N.Y. Law '74	Legal/Mgmt	15	4	



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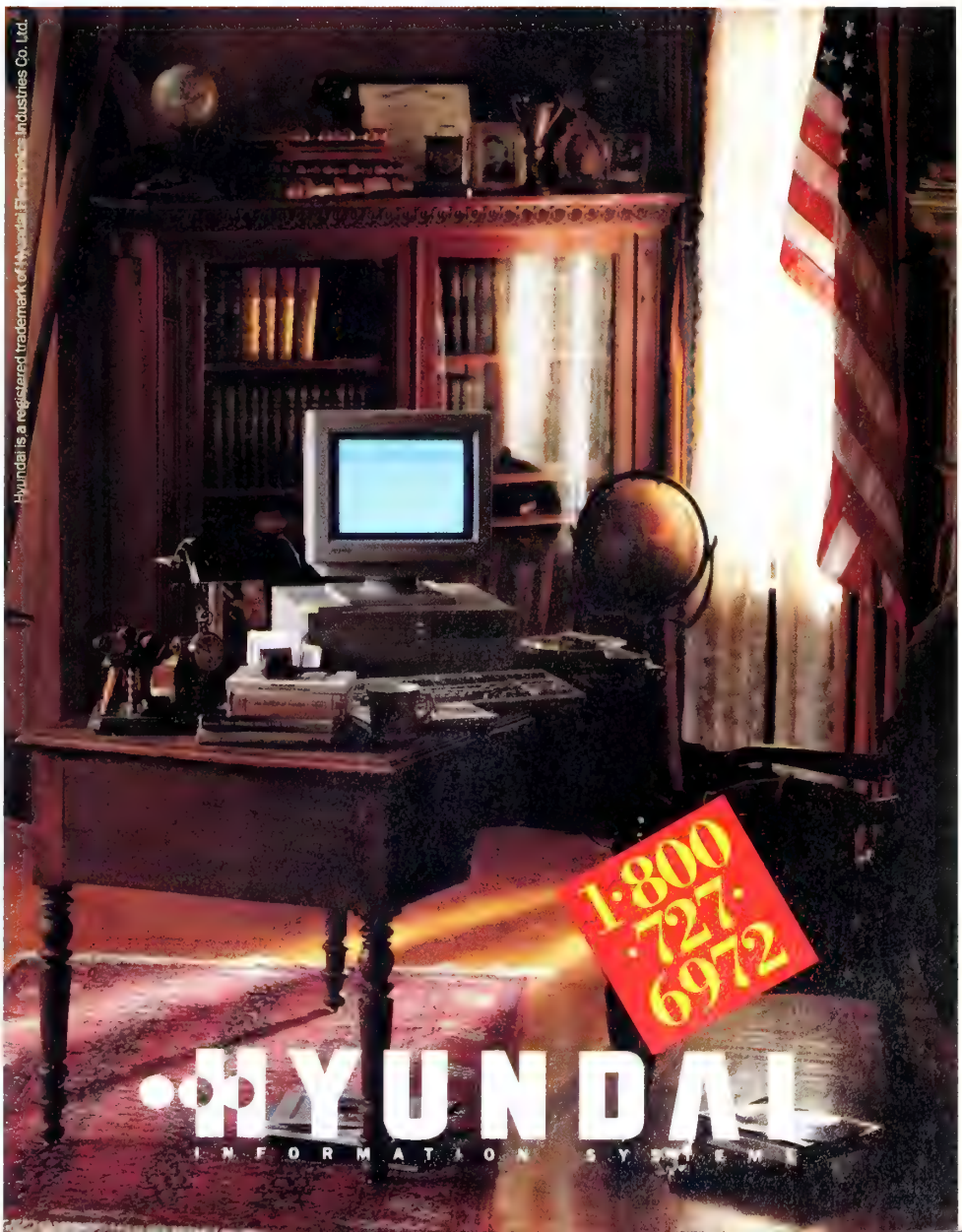

THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	P TI
KANSAS CITY POWER & LIGHT	A. DRUE JENNINGS	MO	761	103	1300	10/7/46	KS	BS, U. of Kan. '68	JD, U. of Kan. '72	Legal	18	3	
KANSAS CITY SOUTHERN INDUSTRIES	LANDON HILL ROWLAND	MO	528	41	563	5/20/37	NC	BA, Dartmouth '59	LLB, Harvard '62	Legal	12	5	
KANSAS GAS & ELECTRIC	WILSON K. CADMAN	KS	587	64	895	9/7/27	KS	BA, Wichita State '51		Marketing	40	11	
KANSAS POWER & LIGHT	JOHN E. HAYES JR.	KS	1200	80	886	9/22/37	MO	BS, Rockhurst '59		Administration	2	2	
KELLOGG	WILLIAM EDWARD LaMOTHE	MI	5200	503	13100	10/23/26	NY	BA, Fordham '50		Marketing	41	12	1
KELLY SERVICES	TERENCE E. ADDERLEY	MI	1500	71	1100	9/1/33	MI	BBA, U. of Mich. '55	MBA, U. of Mich. '56	Finance	34	24	
KEMPER	JOSEPH E. LUECKE	IL	2900	12	1500	2/26/27	PA	BA, LaSalle '50		Insurance	40	12	
KENTUCKY UTILITIES	JOHN T. NEWTON	KY	554	80	927	7/29/30	KY	BS, Western Ky. '52		Finance	34	4	
KERR-McGEE	FRANK A. McPHERSON	OK	3700	113	2100	4/29/33	OK	BS, Okla. State '57		Ops/Mgmt	35	8	
KEYCORP	VICTOR J. RILEY JR.	NY	1800	148	1800	8/29/31	NY	BA, Notre Dame '53		Finance	28	18	1
KEYSTONE INTERNATIONAL	RAYMOND ALBERT LeBLANC	TX	446	44	1100	3/1/30	NY	BSCE, U. of Detroit '55	U. of Detroit	Marketing	35	6	
KIMBALL INTERNATIONAL	DOUGLAS A. HABIG	IN	613	43	439	9/13/46	KY	BS, St. Louis '68	MBA, Indiana '72	Finance	16	1	
KIMBERLY-CLARK	DARWIN E. SMITH	TX	6400	432	7700	4/16/26	IN	BS, Indiana '50	LLB, Harvard '55	Finance/Adm	33	20	1
KING WORLD PRODUCTIONS	MICHAEL GORDON KING	CA	454	84	1100	3/8/48	NJ	BA, Fairleigh Dickinson '71		Mktg/Sales	9	7	
KMART	JOSEPH E. ANTONINI	MI	32300	756	9100	7/13/41	WV	BS, U. of W. Va. '64		Marketing	28	4	

EXECUTIVE TO WATCH

▶ His discounter is in the midst of a massive $2.3 billion store-modernization campaign. Wants the 2,349 outlets to match Wal-Mart's or Target's contemporary look. Recently announced plans to acquire OfficeMax, an office-supply chain and nice addition to other specialty holdings, Waldenbooks and PayLess Drug Stores. The recession smarts, though. To boost Christmas sales, the retailer is teaming up with Walt Disney to run a national sweepstakes.

KNIGHT-RIDDER	JAMES KNOX BATTEN	FL	2300	149	2700	1/11/36	VA	BS, Davidson '57	MPA, Princeton '62	Journalism	34	3	
KROGER	JOSEPH A. PICHLER	OH	20300	83	1500	10/3/39	MO	BBA, Notre Dame '61	MBA '63/PhD '66, U. of Chicago	Academia/Ops	11	1	
LAFARGE	ROBERT W. MURDOCH	VA	1600	50	812	3/3/42	Australia	BA, U. of Brit. Col. '64	LLB, U. of Toronto '67	Production	24	3	
LANCE	JOHN WILLIAM DISHER	NC	446	46	688	7/16/33	NC	BBA, Wake Forest '59		Finance	32	3	
LAWSON PRODUCTS	BERNARD KALISH	IL	186	23	414	8/2/37	IL	DePaul		Distribution	36	2	
LAWTER INTERNATIONAL	DANIEL TERRA	IL	150	23	479	6/9/11	PA	BS, Penn State '31		Entrepreneur	51	33	
LEE ENTERPRISES	RICHARD D. GOTTLIEB	IA	274	43	550	6/12/42	IA	BS, U. of Ariz. '64		Administration	27	0	
LEGENT	JOE M. HENSON	VA	170	33	616	7/11/33	AR	BS, U. of Ark. '54		Marketing	2	2	
LEGGETT & PLATT	HARRY M. CORNELL JR.	MO	1100	29	591	10/5/28	Sumatra	BS, U. of Mo. '50		Marketing	41	32	
LESLIE FAY	JOHN J. POMERANTZ	NY	859	29	403	7/4/33	NY	BS, Wharton '55		Marketing	21	5	
LG&E ENERGY	ROGER W. HALE	KY	699	83	946	7/16/43	MD	BA, U. of Md. '65	MS, MIT '79	Marketing/Ops	2	2	
LILLY (ELI)	VAUGHN D. BRYSON	IN	5200	1100	24600	5/25/38	NC	BS, U. of N.C. '60		Marketing	30	0	
LIMITED (THE)	LESLIE H. WEXNER	OH	5400	398	10400	9/8/37	OH	BS, Ohio State '59	Ohio State	Mktg/Finance	28	28	
LIN BROADCASTING	CRAIG O. McCAW	NY	378	−223	3800	8/11/49	WA	BA, Stanford '73		Management	2	2	
LINCOLN NATIONAL	IAN McKENZIE ROLLAND	IN	8500	191	2100	6/3/33	IN	BA, DePauw '55	MA, U. of Mich. '56	Fin/Insurance	35	14	
LINEAR TECHNOLOGY	ROBERT H. SWANSON JR.	CA	76	11	442	8/9/38	MA	BS, Northeastern '63	U. of San Francisco	Technical	10	10	
LITTON INDUSTRIES	ORION L. HOCH	CA	5200	179	1900	12/21/28	PA	BS, Carnegie-Mellon '52	MS, UCLA '54; PhD, Stanford '57	Technical/Ops	34	5	
LIZ CLAIBORNE	JEROME A. CHAZEN	NY	1700	206	3700	3/21/27	NY	BA, U. of Wis. '48	MBA, Columbia '50	Marketing	14	2	
LOCKHEED	DANIEL M. TELLEP	CA	10000	335	2700	11/20/31	PA	BS, Cal/Berkeley '54	MS, Cal/Berkeley '55	Technical	36	3	
LOCTITE	KENNETH W. BUTTERWORTH	CT	510	61	1500	8/9/25	Australia	BS, Sydney Tech '55		Marketing	16	7	
LOEWS	PRESTON ROBERT TISCH	NY	12300	805	7200	4/29/26	NY	BA, U. of Mich. '48		Operations	32	4	
LONG ISLAND LIGHTING	WILLIAM J. CATACOSINOS	NY	2400	320	2700	4/12/30	NY	BS, NYU '51	MBA '52/PhD '62, NYU	Administration	8	8	
LONGS DRUG STORES	ROBERT MERRILL LONG	CA	2300	60	776	5/19/38	CA	BA, Claremont Men's '60		Marketing	30	14	
LONGVIEW FIBRE	RICHARD PETER WOLLENBERG	WA	685	61	724	8/1/15	AK	BS, Cal/Berkeley '36	MBA, Harvard '38	Tech/Finance	52	14	
LORAL	BERNARD L. SCHWARTZ	NY	2100	90	1100	12/13/25	NY	BBA, CCNY '48		Finance	19	19	
LOTUS DEVELOPMENT	JIM P. MANZI	MA	685	23	1700	12/22/51	NY	BA, Colgate '73	MA, Tufts '79	Marketing	8	7	
LOUISIANA LAND & EXPLORATION	H. LEIGHTON STEWARD	LA	859	55	1100	12/1/34	TX	BS, SMU '58	MS, SMU '60	Ops/Technical	9	3	
LOUISIANA-PACIFIC	HARRY A. MERLO	OR	1800	91	1600	3/5/25	CA	BS, Cal/Berkeley '49	Cal/Berkeley	Mktg/Prodn	24	19	
LOWE'S	LEONARD GRAY HERRING	NC	2800	71	1300	6/18/27	NC	BS, U. of N.C. '48		Finance	36	13	
LUBRIZOL	LESTER E. COLEMAN	OH	1500	190	1600	11/6/30	OH	BS, U. of Akron '52	MS '53/PhD '55, U.of Ill.	Research	36	13	
LUBY'S CAFETERIAS	RALPH ERBEN	TX	328	32	500	2/8/31	TX	BS, Baylor '54		Management	32	2	
LUKENS	W. R. WILSON	PA	684	44	422	4/29/27	MD	BS, U. of Md. '49	MBA, U. of Chicago '70	Production	11	10	
LYONDELL PETROCHEMICAL	BOB G. GOWER	TX	6500	356	1800	8/14/37	IL	BS '58/MS '60, So. Ill	PhD, U. of Minn. '63	Research/Tech	28	3	
MAGMA POWER	ANDREW W. HOCH	CA	77	30	616	6/21/23	NY	BS, Stevens Tech '45		Production	11	0	
MANOR CARE	STEWART W. BAINUM JR.	MD	815	32	886	3/25/46	MD	BA, Pacific Union '68	MBA, UCLA '70	Management	18	5	

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THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY THO
MANUFACTURERS NATIONAL	GERALD V. MacDONALD	MI	1200	108	1100	10/30/38	MI	BA, U. of Mich. '60		Banking	31	1	4
MAPCO	JAMES E. BARNES	OK	2700	130	1500	3/2/34	OK	BS, Okla. State '57		Technical	8	8	16
MARION MERRELL DOW	JOSEPH G. TEMPLE JR.	MO	2500	487	9200	8/29/29	IL	BS, Purdue '51		Sales/Mktg	2	2	14
MARRIOTT	JOHN WILLARD MARRIOTT JR.	DC	7600	47	1700	3/25/32	DC	BS, U. of Utah '54		Operations	35	19	7
MARSH & McLENNAN	FRANK J. TASCO	NY	2700	304	5600	8/18/27	NY	BA, NYU '49		Insurance	37	6	15
MARSHALL & ILSLEY	[illegible] A. PUELICHER	WI	833	71	920	11/4/20	WI	BA, U. of Wis. '43		Finance	53	10	8
MARTIN MARIETTA	NORMAN R. AUGUSTINE	MD	6100	328	2600	7/27/35	CO	BS, Princeton '57	MS, Princeton '59	Technical	14	4	11
MASCO	RICHARD A. MANOOGIAN	MI	3200	139	3500	7/30/36	NJ	BA, Yale '58		Management	33	23	19
MATTEL	JOHN W. AMERMAN	CA	1500	91	1300	1/28/32	NJ	BA, Dartmouth '53	MBA, Amos Tuck '54	Marketing	11	5	11
MAXUS ENERGY	CHARLES L. BLACKBURN	TX	685	7	981	1/9/28	OK	BS, U. of Okla. '52		Technical	5	5	6
MAY DEPARTMENT STORES	DAVID C. FARRELL	MO	10100	500	7400	6/14/33	IL	BA, Antioch '56		Marketing	35	12	15
MAYTAG	DANIEL J. KRUMM	IA	3100	99	1500	10/15/26	IA	BA, U. of Iowa '50		Marketing	39	18	9
MBIA	WILLIAM O. BAILEY	NY	224	127	1400	7/1/26	NY	BA, Dartmouth '47	MBA, Wharton '49	Ins/Mgmt	5	5	7
McCAW CELLULAR COMMUNICATIONS	CRAIG O. McCAW	WA	1000	371	5100	8/11/49	WA	BA, Stanford '73		Management	22	6	2
McCLATCHY NEWSPAPERS	ERWIN REA POTTS	CA	421	26	573	4/20/32	NC	AB, U. of N.C. '54		Journalism	16	2	6
McCORMICK	CHARLES P. McCORMICK JR.	MD	1300	69	1800	5/29/28	MD	Johns Hopkins, Duke		Sales/Cp dev	43	5	9
McDERMOTT INTERNATIONAL	ROBERT EDWARD HOWSON	LA	3100	−86	876	8/27/31	LA	BS, La. Tech '53	MS, Tulane '61	Technical	34	3	6
McDONALD'S	MICHAEL R. QUINLAN	IL	6600	802	11700	12/9/44	IL	BS, Loyola '67	MBA, Loyola '70	Production	28	5	12
McDONNELL DOUGLAS	JOHN FINNEY McDONNELL	MO	16200	275	2100	3/18/38	MD	BS, Princeton '60	MS, Princeton '62	Tech/Finance	29	4	5

EXECUTIVE TO WATCH

▶ His defense programs—the F-15, Apache helicopter, and Harrier jump-jet—are all schedule for deep production cuts or termination by 1994. So the soft-spoken son of the founder is banking on growth from the company's commercial-aviation business. Despite snags, his MD 11 widebody jet shows promise. But he faces brutal rivalry from No. 1 Boeing and from Airbus Industrie, bankrolled by European governments.

McGRAW-HILL	JOSEPH L. DIONNE	NY	1900	172	2700	6/29/33	AL	BA '55/MS '57, Hofstra	EdD, Columbia '65	Educ/Publish	25	8	10
MCI COMMUNICATIONS	WILLIAM G. McGOWAN	DC	7700	299	7400	12/10/27	PA	BS, Kings Coll. '52	MBA, Harvard '54	Finance	23	23	14
McKESSON	ALAN SEELENFREUND	CA	8400	105	1400	10/22/36	NY	BA, Cornell '59	MS, Cornell '60; PhD, Stanford '67	Finance	16	2	8
MCN	ALFRED R. GLANCY III	MI	1200	34	492	3/14/38	MI	AB, Princeton '60	MBA, Harvard '62	Finance/Mktg	29	8	5
MDU RESOURCES GROUP	JOHN A. SCHUCHART	ND	329	28	413	11/13/29	NE	BS, Nebraska/Omaha '50		Finance	16	11	3
MEAD	BURNELL R. ROBERTS	OH	4800	106	2000	5/6/27	WI	BBA, U. of Wis. '50	MBA, Harvard '57	Finance	25	9	
MEASUREX	DAVID A. BOSSEN	CA	266	23	385	1/9/27	IA	BS, MIT '51		Technical	24	24	5
MEDCO CONTAINMENT SERVICES	MARTIN J. WYGOD	NJ	1343	58	3400	2/1/40	NY	BS, NYU '61		Finance	14	8	5
MEDIA GENERAL	JOHN STEWART BRYAN III	VA	614	25	537	5/4/38	VA	BA, U. of Va. '60		Journalism	26	1	6
MEDICAL CARE INTERNATIONAL	DONALD E. STEEN	TX	233	29	1200	11/15/46	NY	BS, U. of Mo. '68	MS, St. Louis '73	Finance	10	10	4
MEDITRUST	ABRAHAM D. GOSMAN	MA	89	29	581	12/8/28	MA	BS, U. of N.H. '49		Health care	6	6	
MEDTRONIC	WILLIAM W. GEORGE	MN	1000	133	4000	9/14/42	MI	BS, Ga. Tech '64	MBA, Harvard '66	Technical	2	0	4
MELLON BANK	FRANK V. CAHOUET	PA	3500	174	1700	5/25/32	MA	AB, Harvard '54	MBA, Wharton '59	Banking/Adm	4	4	1
MELVILLE	STANLEY P. GOLDSTEIN	NY	8700	385	4900	6/5/34	RI	BS, Wharton '55		Marketing	22	5	1
MENTOR GRAPHICS	THOMAS H. BRUGGERE	OR	435	24	603	2/18/46	CA	BS, Cal/Santa Barbara '68	MS, U. of Wis. '72; MBA, Pepperdine '75	Technical	10	10	
MERCANTILE BANCORPORATION	THOMAS H. JACOBSEN	MO	757	57	622	10/15/39	IL	BS, Lake Forest '63	MBA, U. of Chicago '68	Banking	3	3	
MERCANTILE BANKSHARES	HENRY FURLONG BALDWIN	MD	495	69	777	1/15/32	MD	AB, Princeton '54		Finance	35	15	
MERCANTILE STORES	DAVID R. HUHN	OH	2400	124	1500	10/18/37	OH	BS, Xavier '59		Marketing	32	2	
MERCK	P. ROY VAGELOS	NJ	7700	1800	49000	10/8/29	NJ	AB, U. of Pa. '50	MD, Columbia P&S '54	Research	16	6	2
MERCURY FINANCE	JOHN N. BRINCAT	IL	95	23	781	4/7/36	NY			Finance	8	8	
MEREDITH	JACK D. REHM	IA	735	−1	437	10/10/32	NY	BS, Holy Cross '54		Marketing	29	3	
MERIDIAN BANCORP	SAMUEL A. McCULLOUGH	PA	1300	48	806	11/10/38	PA	BS, U. of Pittsburgh '60		Finance	16	13	
MERRILL LYNCH	WILLIAM A. SCHREYER	NY	11200	192	4300	1/13/28	PA	BS, Penn State '48		Management	43	7	1
MERRY-GO-ROUND ENTERPRISES	MICHAEL DENNIS SULLIVAN	MD	628	37	759	11/15/39	IL	BS, Loyola '61		Finance	17	9	
METRO MOBILE CTS	GEORGE LYLE LINDEMANN	NY	224	−80	1300	3/26/36	NY	BS, Wharton '58		Prodn/Ops	12	10	
MEYER (FRED)	ROBERT G. MILLER	OR	2500	34	497	4/12/44	MS	Orange Coast		Marketing	0	0	
MICHIGAN NATIONAL	ROBERT J. MYLOD	MI	1200	48	549	11/21/39	NY	BA, St. John's '61		Finance	7	7	
MICRON TECHNOLOGY	JOSEPH L. PARKINSON	ID	333	5	527	8/6/45	TX	BA, Columbia '67	JD, Tulane '71; LLM, NYU '72	Legal	13	6	1
MICROSOFT	WILLIAM H. GATES III	WA	1843	463	14800	10/28/55	WA	Harvard		Technical	16	16	
MIDWEST RESOURCES	MARK W. PUTNEY	IA	894	68	994	1/25/29	IA	BA, U. of Iowa '51	JD, U. of Iowa '57	Legal	19	7	
MILLER (HERMAN)	RICHARD H. RUCH	MI	865	47	452	4/15/30	IN	BA, Mich. State '52		Finance/Prodn	36	4	
MILLIPORE	JOHN ALEXANDER GILMARTIN	MA	703	28	1100	3/29/42	NJ	BS, Penn State '65	MBA, Harvard '67	Finance	12	5	
MINNESOTA MINING & MFG.	ALLEN F. JACOBSON	MN	13000	1300	19100	10/7/26	NE	BS, Iowa State '47		Prodn/Mgmt	44	6	

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THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	T
MINNESOTA POWER	AREND J. SANDBULTE	MN	477	75	845	12/9/33	IA	BSEE, Iowa State '59	MBA, U. of Minn. '66	Finance	27	3	
MIRAGE RESORTS	STEPHEN A. WYNN	NV	909	30	417	1/27/42	CT	BA, U of Pa. '63		Operations	19	19	
MITCHELL ENERGY & DEVELOPMENT	GEORGE P. MITCHELL	TX	791	47	919	5/21/19	TX	BS, Tex. A&M '40		Technical	45	32	
MOBIL	ALLEN E. MURRAY	VA	57800	1900	27300	3/5/29	NY	BS, NYU '56		Finance	39	6	
MOLEX	FREDERICK A. KREHBIEL	IL	594	62	1700	6/2/41	IL	BA, Lake Forest '63	Georgetown, Leicester	Marketing	27	3	
MONSANTO	RICHARD J. MAHONEY	MO	9000	546	9300	1/30/34	MA	BS, U. of Mass. '55		Mktg/Mgmt	29	8	
MONTANA POWER	W. PAUL SCHMECHEL	MT	450	95	1200	6/26/27	ND	BS, Mont. State '53		Tech/Prodn	38	8	
MORGAN (J. P.)	DENNIS WEATHERSTONE	NY	10500	775	10500	11/29/30	England	Northwestern Poly.		Finance	45	2	
MORGAN STANLEY GROUP	RICHARD B. FISHER	NY	5900	270	3500	7/21/36	PA	AB, Princeton '57	MBA, Harvard '62	Finance	29	1	
MORRISON	ERNEST EUGENE BISHOP	AL	898	23	480	5/5/30	GA			Retailing	44	5	
MORRISON KNUDSEN	WILLIAM J. AGEE	ID	1600	34	565	1/5/38	ID	BS, U. of Idaho '60	MBA, Harvard '63	Finance/Mgmt	3	3	
MORTON INTERNATIONAL	CHARLES STANLEY LOCKE	IL	1600	135	2700	3/5/29	MS	BA, U. of Miss. '52	MS, U. of Miss. '55	Finance	16	11	
MOTOROLA	GEORGE M.C. FISHER	IL	10900	499	9000	11/30/40	IL	BS, U. of Ill. '62	MS '64/PhD '66, Brown	Tech/Prodn	15	4	
MULTIMEDIA	WALTER E. BARTLETT	SC	481	49	961	2/23/28	OH	AB, Bowling Green '49		Sales/Mgmt	16	7	
MURPHY OIL	JACK WRAY McNUTT	AR	2000	102	1600	9/7/34	AR	BS, Harding '56	MBA, Columbia '57	Finance	34	4	
MYLAN LABORATORIES	ROY McKNIGHT	PA	91	33	1000	3/13/21	PA	BS, Princeton '42		Technical	16	15	
NACCO INDUSTRIES	ALFRED M. RANKIN JR.	OH	1400	31	423	10/8/41	OH	BA, Yale '63	JD, Yale '66	Legal	3	0	
NALCO CHEMICAL	WORLEY H. CLARK	IL	1200	131	2200	6/18/32	VA	BS, N C. State '56	Cleveland-Marshall	Sales	32	9	
NATIONAL CITY	EDWARD B. BRANDON	OH	2700	234	2400	9/15/31	IA	BS, Northwestern '53	MBA, Wharton '56	Finance/Bank	35	4	
NATIONAL FUEL GAS	BERNARD JOSEPH KENNEDY	NY	892	52	729	8/16/31	NY	BA, Niagara '53	JD, U. of Mich. '58	Legal	33	3	
NATIONAL HEALTH LABORATORIES	ROBERT EUGENE DRAPER	CA	502	83	2200	12/12/36	NY	N. Tex. State, Pace		Mktg/Finance	20	17	
NATIONAL MEDICAL ENTERPRISES	RICHARD KEITH EAMER	CA	3900	242	3600	2/13/28	CA	BS, USC '55	LLB, USC '59	Legal/Health	22	22	
NATIONAL SEMICONDUCTOR	GILBERT F. AMELIO	CA	1700	−150	519	3/1/43	NY	BS, Ga Tech '65	MS, Ga. Tech '67	Technical	1	0	
NATIONAL SERVICE INDUSTRIES	SIDNEY KIRSCHNER	GA	1600	100	1200	12/24/34	Canada	BS, N.Mex. Mines '56		Technical	18	4	
NAVISTAR INTERNATIONAL	JAMES C. COTTING	IL	3900	−11	782	10/15/33	MA	BA, Ohio State '55		Finance	13	4	
NBD BANCORP	CHARLES THOMAS FISHER III	MI	2700	275	3000	11/22/29	MI	AB, Georgetown '51	MBA, Harvard '53	Finance	33	9	
NCH	LESTER A. LEVY	TX	678	43	571	9/19/22	TX	U. of Tex.	LLB, U. of Tex. '43	Legal	45	26	
NCNB	HUGH L. McCOLL JR.	NC	6700	366	4500	6/18/35	SC	BS, U. of N.C. '57		Finance/Bank	32	8	

EXECUTIVE TO WATCH

▶The superbanker landed a deal to acquire C&S/Sovran, creating a regional powerhouse with roughly $116 billion in total assets. This superregional boasts strong middle-market lending capabilities and dazzling retail-banking operations. C&S/Sovran's extensive branch network, concentrated in Georgia and Virginia, will dovetail nicely with his bank's stronghold in North Carolina and Florida. The ebullient, hard-driving boss is a fourth-generation banker

NCR	CHARLES E. EXLEY JR.	OH	6300	369	7100	12/14/29	MI	BA, Wesleyan '52	MBA, Columbia '54	Finance	15	8	
NEIMAN MARCUS GROUP	RICHARD ALAN SMITH	MA	1700	28	550	11/1/24	MA	BS, Harvard '46		Management	4	4	
NERCO	GERARD K. DRUMMOND	OR	828	80	809	10/9/37	NY	BS, Cornell '59	LLB, Cornell '63	Legal	15	15	
NETWORK SYSTEMS	LYLE D. ALTMAN	MN	164	22	488	10/12/30	KS	BS, U. of Neb. '52		Marketing	15	10	
NEUTROGENA	LLOYD E. COTSEN	CA	210	17	619	2/25/29	MA	AB, Princeton '50	MBA, Harvard '57	Marketing	34	9	
NEVADA POWER	CHARLES ALBERT LENZIE	NV	481	25	641	9/5/37	IL	BS, U. of Ill. '60		Finance	17	2	
NEW ENGLAND ELECTRIC SYSTEM	JOHN W. ROWE	MA	1900	273	2000	5/18/45	WI	BS, U. of Wis. '67	JD, U. of Wis. '70	Legal	3	3	
NEW PLAN REALTY TRUST	WILLIAM NEWMAN	NY	54	35	794	7/6/26	NY	BBA, CCNY '47		Finance	49	30	
NEW YORK STATE ELECTRIC & GAS	JAMES ANDREW CARRIGG	NY	1500	158	1700	4/17/33	NY	AAS, Broome CC '58		Management	33	3	
NEW YORK TIMES	ARTHUR OCHS SULZBERGER	NY	1800	65	1700	2/5/26	NY	BA, Columbia '51		Journalism	40	18	
NEWELL	DANIEL C. FERGUSON	IL	1100	101	2500	5/4/27	IL	BA, Hamilton '48	MBA, Stanford '50	Production	41	25	
NEWMONT GOLD	GORDON RAE PARKER	CO	643	142	3700	12/2/35	S Africa	BS '58/MS '59, Montana Mines	MBA, U. of Cape Town '66	Technical	32	6	
NEWMONT MINING	GORDON RAE PARKER	CO	683	168	2400	12/2/35	S Africa	BS '58/MS '59, Montana Mines	MBA, U. of Cape Town '66	Technical	32	6	
NIAGARA MOHAWK POWER	WILLIAM J. DONLON	NY	3200	83	2200	1/28/30	NY	BS, Siena '62		Mktg/Mgmt	43	3	
NICOR	RICHARD G. CLINE	IL	1500	114	1200	2/17/35	IL	BS, U. of Ill. '57	DePaul	Marketing	6	6	
NIKE	PHILIP H. KNIGHT	OR	2200	243	3700	2/24/38	OR	BA, U. of Ore. '59	MBA, Stanford '62	Mktg/Prodn	22	22	
NIPSCO INDUSTRIES	EDMUND ARMIN SCHROER	IN	1500	138	1500	2/14/28	IN	BA, Valparaiso '49	JD, Northwestern '52	Legal	15	15	
NL INDUSTRIES	J. LANDIS MARTIN	TX	907	94	1000	11/5/45	NE	BS, Northwestern '68	JD, Northwestern '73	Legal	4	4	
NOBLE AFFILIATES	ROBERT KELLEY	OK	223	29	673	6/18/45	OK	BS, U. of Okla. '73		Finance	16	5	
NORDSON	WILLIAM PAUL MADAR	OH	345	29	552	11/3/39	OH	BS, Purdue '61	MBA, Stanford '65	Production	6	6	
NORDSTROM	BRUCE A. NORDSTROM	WA	2900	116	3900	10/1/33	WA	BA, U. of Wash. '56		Marketing	31	14	
NORFOLK SOUTHERN	ARNOLD BORDEN McKINNON	VA	4600	556	7400	8/13/27	NC	AB, Duke '50	LLB, Duke '51	Finance/Legal	40	5	
NORTHEAST UTILITIES	WILLIAM B. ELLIS	CT	2600	256	2400	7/4/40	MS	BS, Carnegie-Mellon '62	PhD, U. of Md. '66	Tech/Finance	15	8	
NORTHERN STATES POWER	JAMES J. HOWARD	MN	2100	193	2400	7/1/35	PA	BBA, U. of Pittsburgh '57	MS, MIT '70	Operations	5	5	

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THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY THO
NORTHERN TRUST	DAVID W. FOX	IL	1300	115	1600	8/29/31	IL	BS, Notre Dame '53	MBA, U. of Chicago '58	Finance	36	2	7
NORTHROP	KENT K[illegible]	CA	5500	210	1300	3/24/38	NY	BS, MIT '59	MS, MIT '61	Technical	16	2	1
NORWEST	LLOYD PETER JOHNSON	MN	4100	111	4100	5/1/30	MN	BA, Carleton '52	MBA, Stanford '54	Finance	7	7	13
NOVACARE	JOHN HALLETT FOSTER	PA	102	12	589	5/12/42	OH	BS, Williams '65	MBA, Amos Tuck '67	Venture cap	7	7	
NOVELL	RAYMOND J. NOORDA	UT	498	94	9600	6/19/24	UT	BS, U. of Utah '49		Tech/Mktg	8	8	
NUCOR	F. KENNETH IVERSON	NC	1500	75	1800	9/18/25	IL	BS, Cornell '45	MS, Purdue '47	Technical	29	26	5
NYNEX	WILLIAM C. FERGUSON	NY	13600	949	15200	10/26/30	MI	AB, Albion '52		Technical/Ops	39	2	10
OCCIDENTAL PETROLEUM	RAY R. IRANI	CA	21700	−1688	7400	1/15/35	Lebanon	BS, American(Lebanon) '53	PhD, USC '57	R&D	8	1	20
OCTEL COMMUNICATIONS	DOUGLAS C. CHANCE	CA	128	18	454	2/20/42	PA	BS, Princeton '64	MBA, Stanford '66	Marketing	1	1	3
OFFICE DEPOT	DAVID I. FUENTE	FL	626	10	527	9/10/45	IL	BS, Purdue '67	MS, Purdue '69	Marketing	4	4	4
OGDEN	R. RICHARD ABLON	NY	1600	56	870	10/7/49	NY	BA, Boston U. '71		Ops/Marketing	20	1	11
OGDEN PROJECTS	R. RICHARD ABLON	NJ	369	36	812	10/7/49	NY	BA, Boston U. '71		Ops/Marketing	20	1	
OHIO CASUALTY	JOSEPH LARUE MARCUM	OH	1600	84	823	7/2/23	OH	AB, Antioch '47	MBA, Miami U. (Ohio) '65	Marketing	44	3	4
OHIO EDISON	JUSTIN T. ROGERS JR.	OH	2200	292	3000	8/4/29	OH	AB, Princeton '51	JD, U. of Mich. '54	Legal/Ops	33	12	
OKLAHOMA GAS & ELECTRIC	JAMES G. HARLOW JR.	OK	1200	139	1600	5/29/34	OK	BS, U. of Okla. '57	U. of Okla.	Finance	31	16	4
OLD KENT FINANCIAL	JOHN C. CANEPA	MI	870	87	872	8/26/30	MA	AB, Harvard '53	MBA, NYU '60	Finance	19	9	6
OLD REPUBLIC INTERNATIONAL	ALDO CHARLES ZUCARO	IL	1200	105	710	4/2/39	France	BS, Queens '62		Finance	15	1	5
OLIN	JOHN W. JOHNSTONE JR.	CT	2600	84	1000	11/19/32	NY	BA, Hartwick '54		Marketing	12	4	
OMNICOM GROUP	BRUCE CRAWFORD	NY	1200	52	850	3/16/29	MA	BS, Wharton '52		Advertising	2	2	10
ORACLE SYSTEMS	LAWRENCE JOSEPH ELLISON	CA	971	117	1500	8/17/44	NY	BS, U. of Chicago '65		Technical	14	14	9
ORANGE & ROCKLAND UTILITIES	JAMES F. SMITH	NY	559	43	486	5/15/36	MA	BS, Bentley '56		Finance	27	12	
OREGON STEEL MILLS	THOMAS B. BOKLUND	OR	334	28	555	4/13/39	IN	BS, Tri-State '67		Production	18	6	4
ORYX ENERGY	ROBERT P. HAUPTFUHRER	TX	1900	225	2900	12/31/31	PA	BA, Princeton '53	MBA, Harvard '57	Finance/Ops	34	3	5
OSHKOSH B'GOSH	CHARLES F. HYDE	WI	323	30	496	6/11/20	NJ	AB, Wesleyan '43		Marketing	43	24	5
OVERSEAS SHIPHOLDING GROUP	MORTON PETER HYMAN	NY	394	56	669	1/9/36	NY	BA, Cornell '56	LLD, Cornell '59	Legal	22	20	7
OWENS-CORNING FIBERGLAS	MAX O. WEBER	OH	3100	75	1400	10/30/29	OK	BS, U. of Kan. '51		Marketing	37	1	6
PACCAR	CHARLES McGEE PIGOTT	WA	2800	64	1600	4/21/29	WA	BS, Stanford '51		Tech/Prodn	35	24	5
PACIFIC ENTERPRISES	JAMES R. UKROPINA	CA	6900	−35	2100	9/10/37	CA	AB, Stanford '59	MBA, Stanford '61, LLB, USC '65	Legal	7	2	2
PACIFIC GAS & ELECTRIC	RICHARD A. CLARKE	CA	9500	987	11500	5/18/30	CA	AB, Cal/Berkeley '52	JD, U. of Calif. '55	Legal	36	5	1
PACIFIC TELECOM	CHARLES E. ROBINSON	WA	638	95	1100	12/3/33	AR			Operations	31	6	
PACIFIC TELESIS GROUP	SAM GINN	CA	9700	1000	17100	4/3/37	AL	BS, Auburn '59		Technical	31	3	
PACIFICORP	ALFRED M. GLEASON	OR	3800	474	6000	4/4/30	KS	U. of Ore.		Finance/Adm	42	3	
PAINEWEBBER GROUP	DONALD B. MARRON	NY	3000	−57	616	7/21/34	NY	Baruch		Finance	26	11	
PALL	MAURICE G. HARDY	NY	564	66	2300	5/23/30	England	BME, Merchant Ventures '49		Technical	31	2	
PANHANDLE EASTERN	DENNIS R. HENDRIX	TX	3000	−233	1200	1/8/40	TN	BS, U. of Tenn. '62	MBA, Ga. State '67	Finance	1	1	
PARAMETRIC TECHNOLOGY	STEVEN C. WALSKE	MA	45	10	433	3/26/52	NM	BA, Princeton '74	MBA, Harvard '78	Management	5	5	
PARAMOUNT COMMUNICATIONS	MARTIN S. DAVIS	NY	3900	259	4500	2/5/27	NY	CCNY, NYU		Mktg/Ops	34	9	3
PARKER DRILLING	ROBERT LEE PARKER	OK	109	−19	395	7/16/23	OK	BS, U. of Tex. '44		Technical/Ops	47	37	
PARKER HANNIFIN	PAUL G. SCHLOEMER	OH	2500	110	1200	7/29/28	OH	BS, U. of Cincinnati '51	MBA, Ohio State '55	Tech/Prodn	34	8	
PENN CENTRAL	CARL HENRY LINDNER	OH	2200	98	1300	4/22/19	OH			Finance	9	5	
PENNEY (J.C.)	WILLIAM R. HOWELL	TX	17400	577	6000	1/3/36	OK	BBA, U. of Okla '58		Marketing	33	8	
PENNSYLVANIA POWER & LIGHT	JOHN T. KAUFFMAN	PA	2400	344	3600	8/17/26	NJ	BS, Purdue '50		Technical	41	1	
PENNZOIL	JAMES LEONARD PATE	TX	2200	94	2700	9/6/35	IL	AB, Monmouth '63	MBA, Indiana '64	Finance	15	2	
PEOPLES ENERGY	RICHARD EDWARD TERRY	IL	1200	70	847	7/7/37	WI	BA, St. Norbert '59	LLB, U. of Wis. '64	Legal	19	1	
PEP BOYS—MANNY, MOE & JACK	MITCHELL G. LEIBOVITZ	PA	885	38	1100	5/11/45	PA	AB, Temple '66	MEd '71/MBA '73, Temple	Finance	13	2	
PEPSICO	[illegible]	NY	17800	1100	25600	9/12/35	NC	BBA, Wake Forest '59		Finance	25	5	1
PERKIN-ELMER	GAYNOR N. KELLEY	CT	838	44	875	5/12/31	CT	Delehanty		Production	41	1	
PET	[illegible] L. MARSH	MO	1900	22	1800	7/28/47	S. Africa	BS, U. of Cape Town '70	MBA, U. of Cape Town '73; PhD, Northwestern '76	Management	2	1	1
PETRIE STORES	MILTON PETRIE	NJ	1300	3	1200	8/5/02	UT			Entrepreneur	59	59	
PFIZER	WILLIAM C. STEERE JR.	NY	6400	801	21600	6/17/36	MI	BA, Stanford '59		Marketing	32	0	6
PHELPS DODGE	DOUGLAS C. YEARLEY	AZ	2600	455	2400	1/7/36	IL	BS, Cornell '58		Tech/Prodn	31	2	5
PHH	ROBERT D. KUNISCH	MD	2000	47	483	7/7/41	CT	BS, NYU '63		Marketing	20	4	7

EXECUTIVE TO WATCH

▶ Has a big problem: Congress clipped the wings of his B-2 Stealth bomber program. It's still alive, but barely. The $865 million radar-eluding plane is a dazzling piece of engineering, bu if defense cutbacks ground the B-2, this aircraft maker could see some 50% of total revenues vanish. Trying to build up positions in satellite communications, electronics, and tactical weapons—all expected to be growth areas during the 1990s.

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PHILADELPHIA ELECTRIC	JOSEPH F. PAQUETTE JR.	PA	3700	106	4600	8/24/34	MA	BS, Yale '56	Temple	Finance	35	3	
PHILIP MORRIS	MICHAEL A. MILES	NY	44300	3500	68700	6/22/39	IL	BS, Northwestern '61		Marketing	3	0	
PHILLIPS PETROLEUM	C. J. SILAS	OK	13600	541	7000	4/15/32	FL	BS, Ga Tech '53		Prodn/Ops	38	6	
PIC 'N' SAVE	LEONARD S. WILLIAMS	CA	529	17	557	8/29/47	Canada	Dip , Ryerson Poly '59		Marketing	1	1	
PINNACLE WEST CAPITAL	RICHARD SNELL	AZ	1600	101	1000	11/26/30	AZ	BA, Stanford '52	JD, Stanford '54	Finance/Legal	18	2	
PIONEER HI-BRED INTERNATIONAL	THOMAS N. URBAN	IA	964	73	1600	5/26/34	IA	AB, Harvard '56	MBA, Harvard '60	Marketing	31	10	
PITNEY BOWES	GEORGE B. HARVEY	CT	3200	207	4800	4/7/31	CT	BS, Wharton '54		Finance/Mgmt	35	9	
PITTSTON	JOSEPH CHRISTOPHER FARRELL	CT	1900	46	686	9/27/35	MA	BS, Northeastern '58	MBA, Harvard '63	Finance/Prodn	8	0	
PITTWAY	KING W. HARRIS	IL	944	24	387	4/10/43	MN	BA, Harvard '65	MBA, Harvard '69	Marketing	20	4	
PNC FINANCIAL	THOMAS HENRY O'BRIEN	PA	4900	71	4000	1/16/37	PA	BS, Notre Dame '58	MBA, Harvard '62	Finance	29	6	
POLAROID	ISRAEL MacALLISTER BOOTH	MA	2000	151	1300	12/7/31	GA	BS, Cornell '55	MBA, Cornell '58	Technical/Ops	33	6	
POLICY MANAGEMENT SYSTEMS	G. LARRY WILSON	SC	346	37	1100	7/31/46	NC	BS, U. of S.C. '68	MBA, U. of S.C. '70	Tech/Mktg	25	10	
PORTLAND GENERAL	KEN L. HARRISON	OR	852	113	792	10/14/42	CA	BS, Ore. State '64	MA, Ore. State '66	Finance	17	3	
POTLATCH	RICHARD BLAINE MADDEN	CA	1300	99	1100	4/27/29	NJ	BS, Princeton '51	JD, U. of Mich. '56; MBA, NYU '59	Finance/Prodn	20	20	
POTOMAC ELECTRIC POWER	EDWARD FRANKLIN MITCHELL	DC	1400	170	2400	12/23/31	VA	BEE, U. of Va. '56	MEA, Geo. Washington '60	Technical	35	2	
PPG INDUSTRIES	VINCENT A. SARNI	PA	6000	475	6000	7/11/28	NJ	BS, U. of R.I. '49	NYU	Marketing	23	7	
PRECISION CASTPARTS	WILLIAM C. McCORMICK	OR	538	33	606	10/24/33	OH	BS, U. of Cincinnati '68		Production	6	0	
PREMARK INTERNATIONAL	WARREN L. BATTS	IL	2700	52	1000	9/4/32	VA	BS, Ga Tech '61	MBA, Harvard '63	Administration	11	5	
PREMIER INDUSTRIAL	MORTON L. MANDEL	OH	626	75	1900	9/19/21	OH	Case Western		Administration	45	21	
PRICE	ROBERT EDWARD PRICE	CA	5400	125	3100	8/10/42	CA	BA, Pomona '64		Marketing	16	16	
PRICE (T. ROWE) ASSOCIATES	GEORGE J. COLLINS	MD	170	21	476	7/31/40	CT	BA, VMI '62	MBA, American '70	Finance	20	7	
PRIMERICA	SANFORD I. WEILL	NY	6200	373	3600	3/16/33	NY	BA, Cornell '55		Finance	5	5	
PROCTER & GAMBLE	EDWIN LEWIS ARTZT	OH	27000	1800	28200	4/15/30	NY	BS, U. of Ore. '51		Marketing	38	2	

EXECUTIVE TO WATCH

▶ The new chief is making the consumer-products giant even more bottom-line-oriented. He apt to dole out caustic remarks to managers who disappoint. A career man who built P&G's international business into a powerhouse, he now wants to globalize further in detergent, diapers, and toothpaste. Is investing heavily in cosmetics. Caused a tempest when P&G orde an electronic search of telephone records to track down a suspected press leak.

PROGRESSIVE	PETER BENJAMIN LEWIS	OH	1400	93	1100	11/11/33	OH	BA, Princeton '55		Insurance	36	27	
PROMUS	MICHAEL D. ROSE	TN	1000	23	807	3/2/42	OH	BBA, U. of Cincinnati '63	JD, Harvard '66	Legal/Ops	17	10	
PROVIDENT LIFE & ACCIDENT	WINSTON W. WALKER	TN	2800	179	895	10/19/43	MI	BA, Tulane '65	PhD, U. of Ga. '69	Finance	17	3	
PSI RESOURCES	JAMES E. ROGERS JR.	IN	998	127	934	9/20/47	AL	BBA, U. of Ky. '70	JD, U. of Ky. '74	Legal	3	3	
PUBLIC SERVICE CO. OF COLORADO	DELWIN D. HOCK	CO	1700	146	1300	1/19/35	CO	BS, U. of Colo. '56		Finance	29	3	
PUBLIC SERVICE OF NEW MEXICO	JOHN T. ACKERMAN	NM	855	11	386	8/12/41	OH	BS, U. of N.M. '68	MA, N.M. State '71	Technical	20	1	
PUBLIC SERVICE ENTERPRISE GROUP	E. JAMES FERLAND	NJ	4800	571	6400	3/19/42	MA	BS, U. of Me '64	MBA, U. of New Haven '76	Tech/Finance	5	5	
PUGET SOUND BANCORP	WILLIAM WARREN PHILIP	WA	487	46	470	10/26/26	WA	U. of Wash.		Banking	41	20	
PUGET SOUND POWER & LIGHT	JOHN W. ELLIS	WA	935	132	1300	9/14/28	WA	BS, U. of Wash. '50	JD, U. of Wash. '53	Legal	21	15	
QUAKER OATS	WILLIAM DEAN SMITHBURG	IL	5000	229	4600	7/9/38	IL	BS, DePaul '60	MBA, Northwestern '61	Mktg/Finance	25	10	
QUALITY FOOD CENTERS	STUART M. SLOAN	WA	348	16	636	10/27/43	NY	BA, U. of Wash. '66		Retailing	5	0	
QUANTUM	STEPHEN M. BERKLEY	CA	878	74	450	4/19/44	NJ	BA, Colgate '66	MBA, Harvard '68	Marketing	10	4	
QUANTUM CHEMICAL	JOHN HOYT STOOKEY	NY	2600	21	442	1/29/30	NY	BA, Amherst '52; BS, Columbia '55		Administration	16	5	
QUESTAR	R. D. CASH	UT	536	57	791	6/27/42	TX	BS, Tex. Tech '66		Technical	15	10	
RALSTON PURINA	WILLIAM P. STIRITZ	MO	7100	396	5700	7/1/34	AR	BS, Northwestern '58	MA, St. Louis '68	Marketing	27	10	
RAYCHEM	ROBERT JOSEPH SALDICH	CA	1100	−111	1200	6/7/33	NY	BS, Rice '56	MBA, Harvard '61	Technical	28	1	
RAYTHEON	DENNIS J. PICARD	MA	9300	557	5400	8/25/32	RI	BBA, Northeastern '62		Technical	36	1	
READERS DIGEST ASSOCIATION	GEORGE V. GRUNE	NY	2000	176	4500	7/18/29	NY	BS, Duke '52	U. of Fla.	Sales/Mktg	31	7	
READING & BATES	PAUL BLALOCK LOYD JR.	TX	125	−53	472	6/20/46	LA	BBA, SMU '68	MBA, Harvard '75	Finance	21	0	
REEBOK INTERNATIONAL	PAUL FIREMAN	MA	2200	177	3000	2/14/44	MA	Boston U		Mktg/Sales	12	5	
REPUBLIC NEW YORK	WALTER HERMAN WEINER	NY	2800	201	2400	8/29/30	NY	BA, U. of Mich. '52	JD, U. of Mich. '53	Legal	12	12	
REYNOLDS METALS	WILLIAM O. BOURKE	VA	6000	297	3600	4/12/27	IL	BS, DePaul '51		Marketing	10	5	
RHONE-POULENC RORER	ROBERT E. CAWTHORN	PA	2900	1	6400	9/28/35	England	BA, Cambridge '59		Tech/Adm	9	6	
RITE AID	ALEX GRASS	PA	3400	107	2100	8/3/27	PA		LLB, U. of Fla. '49	Legal/Retail	38	29	
RJR NABISCO HOLDINGS	LOUIS V. GERSTNER JR.	NY	13900	−462	10400	3/1/42	NY	BA, Dartmouth '63	MBA, Harvard '65	Marketing	2	2	
ROADWAY SERVICES	JOSEPH MARK CLAPP	OH	3000	119	1900	7/29/36	NC	BS, U. of N.C. '58		Sales	24	4	
ROCHESTER GAS & ELECTRIC	ROGER W. KOBER	NY	831	60	651	5/2/33	NY	BME, Clarkson '55	ME, Rochester Tech '83	Technical	26	0	
ROCHESTER TELEPHONE	ALAN C. HASSELWANDER	NY	600	50	865	2/16/34	NY	BA, St. Bernard's '55	MBA, U. of Rochester '74	Adm/Ops	34	7	
ROCKEFELLER CENTER PROPERTIES	DAVID ROCKEFELLER	NY	124	38	652	6/12/15	NY	BS, Harvard '36	PhD, U. of Chicago '40	Banking	10	6	

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THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PAY THO
ROCKWELL INTERNATIONAL	DONALD R. BEALL	CA	12400	624	6100	11/29/38	CA	BS, San Jose State '60	MBA, U. of Pittsburgh '61	Finance	24	4	14
ROHM & HAAS	J. LAWRENCE WILSON	PA	2800	207	3100	3/2/36	MS	BS, Vanderbilt '58	MBA, Harvard '63	Finance/Adm	26	3	7
ROHR INDUSTRIES	ROBERT H. GOLDSMITH	CA	1100	0	437	5/15/30	NY	BSME, U. of Buffalo '51	MBA, Xavier '60	Technical	7	2	6
ROLLINS	R. RANDALL ROLLINS	GA	436	27	606	11/5/31	GA	U. of Del		Administration	32	0	2
ROLLINS ENVIRONMENTAL SERVICES	JOHN W. ROLLINS SR.	DE	221	26	557	8/24/16	GA	ICS		Entrepreneur	23	3	4
ROSS STORES	NORMAN FERBER	CA	798	17	400	8/25/48	NY	Long Island		Marketing	9	4	
ROUSE	MATHIAS J. DeVITO	MD	530	−1	945	8/23/30	NJ	BA, U. of Md. '54	LLB, U. of Md. '56	Legal	23	12	8
ROWAN	C. ROBERT PALMER	TX	292	2	636	12/15/34	TX	BSME, SMU '57	MSEA, SMU '66	Technical	38	20	7
RPM	THOMAS CHRISTOPHER SULLIVAN	OH	445	28	663	7/8/37	OH	BS, Miami U. (Ohio) '59		Marketing	30	20	7
RUBBERMAID	WALTER WHITE WILLIAMS	OH	1500	144	4600	5/17/34	NY	BS, Utica (Syracuse) '63		Marketing	4	0	7
RUSSELL	EUGENE CLEVELAND GWALTNEY	AL	714	68	1200	1/25/18	SC	BSME, Ga. Tech '40	MIT	Production	39	19	4
RYAN'S FAMILY STEAK HOUSES	CHARLES D. WAY	SC	273	24	514	3/17/53	England	BS, Clemson '75		Finance	12	2	1
RYDER SYSTEM	MITCHEL ANTHONY BURNS	FL	5200	82	1300	11/1/42	NV	BS, Brigham Young '64	MBA, Cal/Berkeley '65	Finance	17	9	7
SAFECO	CLIFFORD BRUCE MAINES	WA	3100	278	2400	8/14/26	WA	BS, U. of Wash. '48	JD, U of Wash '49	Legal	42	6	5
SAFETY-KLEEN	DONALD W. BRINCKMAN	IL	589	55	1700	3/17/31	IL	BS, Northwestern '54	MBA, Northwestern '59	Marketing	32	23	6
SAFEWAY	PETER ALDEN MAGOWAN	CA	14900	87	1800	4/5/42	NY	AB, Stanford '64	MA, Oxford '66	Retail/Ops	24	12	14
SALOMON	WARREN EDWARD BUFFETT	NY	35900	303	2800	8/30/30	NE	BS, U. of Neb. '50	MS, Columbia '51	Finance	0	0	

EXECUTIVE TO WATCH

▶ The Sage of Omaha arrives in the big city. When the Treasury-bond scandal broke, Solly recruited its major shareholder as acting chairman to replace disgraced John H. Gutfreund. Has launched a *mea culpa* campaign before Congress and regulators. Promises more ethical conduct from Solly traders and plans to bring stratospheric Wall Street paychecks back down to earth. The noted "value" investor is a math whiz who doesn't use a calculator.

SAN DIEGO GAS & ELECTRIC	THOMAS ALEXANDER PAGE	CA	1800	208	2300	3/24/33	NY	BS, Purdue '55	MS, Purdue '63	Tech/Finance	13	10	
SANFORD	HENRY B. PEARSALL	IL	139	24	437	6/4/34	IL	AB, Amherst '56	JD, U. of Mich. '61	Administration	22	4	
SANTA FE ENERGY RESOURCES	JAMES L. PAYNE	TX	383	17	813	3/7/37	IL	BS, Colorado Mines '59	MBA, Golden Gate '74	Technical	9	1	
SANTA FE PACIFIC	ROBERT D. KREBS	IL	2300	−101	1800	5/2/42	CA	BA, Stanford '64	MBA, Harvard '66	Finance	25	4	
SARA LEE	JOHN H. BRYAN	IL	11600	470	10500	10/5/36	MS	BA, Rhodes '58		Finance/Ops	23	17	
SAVANNAH FOODS & INDUSTRIES	WILLIAM WALLACE SPRAGUE JR.	GA	1200	49	536	11/11/26	GA	BS, Yale '50		Marketing	40	19	
SBARRO	MARIO SBARRO	NY	190	20	465	3/11/42	Italy			Retailing/Ops	33	6	
SCANA	LAWRENCE M. GRESSETTE JR.	SC	1100	189	1700	2/23/32	SC	BS, Clemson '54	LLB, U. of S.C. '59	Legal	9	2	
SCECORP	JOHN E. BRYSON	CA	7200	830	9500	7/24/43	NY	BA, Stanford '65	JD, Yale '69	Legal	8	1	
SCHERING-PLOUGH	ROBERT P. LUCIANO	NJ	3300	565	12200	10/9/33	NY	BBA, CCNY '54	JD, U. of Mich. '58	Legal/Adm	13	10	
SCHLUMBERGER	D. EUAN BAIRD	NY	5300	570	17300	9/16/37	Scotland	BA, Cambridge '60		Technical	31	5	
SCHULMAN (A.)	TERRY LEE HAINES	OH	679	36	743	8/5/46	OH	U. of Akron		Marketing	26	1	
SCHWAB (CHARLES)	CHARLES R. SCHWAB	CA	626	17	726	7/29/37	CA	BS, Stanford '59	MBA, Stanford '61	Finance	17	17	
SCIMED LIFE SYSTEMS	DALE ALLEN SPENCER	MN	112	29	1200	5/2/45	ME	BS, U. of Me. '67	MBA, Southern Ill. '73	Sales/Mgmt	11	5	
SCOTT PAPER	PHILIP E. LIPPINCOTT	PA	5400	148	3000	11/28/35	NJ	BA, Dartmouth '57	MBA, Mich. State '64	Mktg/Prod dev	32	10	
SCRIPPS (E.W.)	LAWRENCE A. LESER	OH	1300	48	1600	5/15/35	OH	BSBA, Xavier '57		Finance	24	6	
SCRIPPS HOWARD BROADCASTING	RICHARD J. JANSSEN	OH	326	30	496	4/19/36	OH			Sales/Mgmt	13	3	
SEAGATE TECHNOLOGY	ALAN F. SHUGART	CA	2400	117	656	9/27/30	CA	BS, U. of Redlands '51		Tech/Prodn	12	12	
SEARS, ROEBUCK	EDWARD A. BRENNAN	IL	56000	892	14300	1/16/34	IL	BS, Marquette '55		Merchandising	35	6	
SECURITY PACIFIC	ROBERT H. SMITH	CA	10300	161	4400	9/3/35	CA	BS, USC '57	JD, Van Norman '66	Finance	30	2	
SENSORMATIC ELECTRONICS	RONALD G. ASSAF	FL	191	20	630	6/2/35	OH	U. of Akron		Marketing	25	17	
SEQUA	NORMAN E. ALEXANDER	NY	2200	33	554	7/23/14	NY	BA, Columbia '34	JD, Columbia '36	Management	34	34	
SERVICE CORP. INTERNATIONAL	ROBERT LYNN WALTRIP	TX	563	64	1200	1/10/31	TX	BA, U. of Houston '54		Entrepreneur	29	29	
SERVICE MERCHANDISE	RAYMOND ZIMMERMAN	TN	3400	61	858	4/4/33	TN	U. of Miami, Memphis St.		Marketing	31	10	
SHARED MEDICAL SYSTEMS	R. JAMES MACALEER	PA	403	23	499	1/29/34	NJ	BS, Princeton '55	U. of Del.	Technical	22	22	
SHAW INDUSTRIES	ROBERT E. SHAW	GA	1500	65	983	8/18/31	GA	U. of the South		Administration	31	22	
SHAWMUT NATIONAL	JOEL BARNES ALVORD	CT	2700	−133	737	11/29/38	CT	AB, Dartmouth '60	MBA, Amos Tuck '61	Finance	29	5	
SHERWIN-WILLIAMS	JOHN GERALD BREEN	OH	2300	123	2100	7/21/34	OH	BS, John Carroll '56	MBA, Case Western '61	Production	13	13	
SHONEY'S	LEONARD H. ROBERTS	TN	926	30	677	2/19/49	IL	BS, U. of Ill. '71	JD, DePaul '74	Marketing	2	2	
SIERRA PACIFIC RESOURCES	AUSTIN W. STEDHAM	NV	471	48	542	12/25/28	KS	BS, Kan. State '52		Technical	7	1	
SIGMA-ALDRICH	CARL THOMAS CORI	MO	529	71	2100	8/13/36	MO	BS, U. of Wis. '59	PhD, Wash. U. (Mo.) '69	Technical	20	12	
SIGNET BANKING	ROBERT M. FREEMAN	VA	1400	41	601	5/10/41	VA	BS, U. of Va. '63		Finance	20	2	
SILICON GRAPHICS	EDWARD R. McCRACKEN	CA	420	32	795	12/24/43	IA	BSEE, Iowa State '66	MBA, Stanford '68	Marketing	7	7	
SIZZLER INTERNATIONAL	RICHARD P. BERMINGHAM	CA	491	19	449	4/24/39	NJ	BS, U. of Colo. '62		Finance	24	4	
SMITH'S FOOD & DRUG CENTERS	JEFFREY P. SMITH	UT	2000	34	1100	2/20/50	UT	Utah State		Retailing	29	3	
SMUCKER (J.M.)	PAUL H. SMUCKER	OH	455	32	871	4/21/19	OH	BS, Miami U. (Ohio) '39		Finance	52	21	

V.32 Smorgasbord

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UDS, acknowledged by leading trade magazines and independent research organizations as the world's premier supplier of V.32 modems, offers more variations on the V.32 theme than any other manufacturer.

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PACKAGING—Board-level IBM plug-ins, standalone packages or central site rack-mountable cards.

THROUGHPUT—Selected models offer MNP® levels 4 and 5 for error control and data compression; others, in compliance with CCITT V.42 *bis*, offer MNP or LAP-M compression throughput rates up to 38,400 bps.

CONNECTIVITY—Sync-Up™ board-level versions of V.32s are available for various combinations of BSC, SNA and OS/2 host-to-remote communication for EDI, X.25, BSC, SNA and LU6.2 applications.

PC APPLICATIONS—V.32s are available in the FasTalk® configuration, designed especially for PC use.

INTERNATIONAL ACCEPTABILITY—Several versions of the UDS V.32 have already been qualified to non-U.S. operating standards, assuring their acceptability in multinational networks.

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THE CORPORATE ELITE

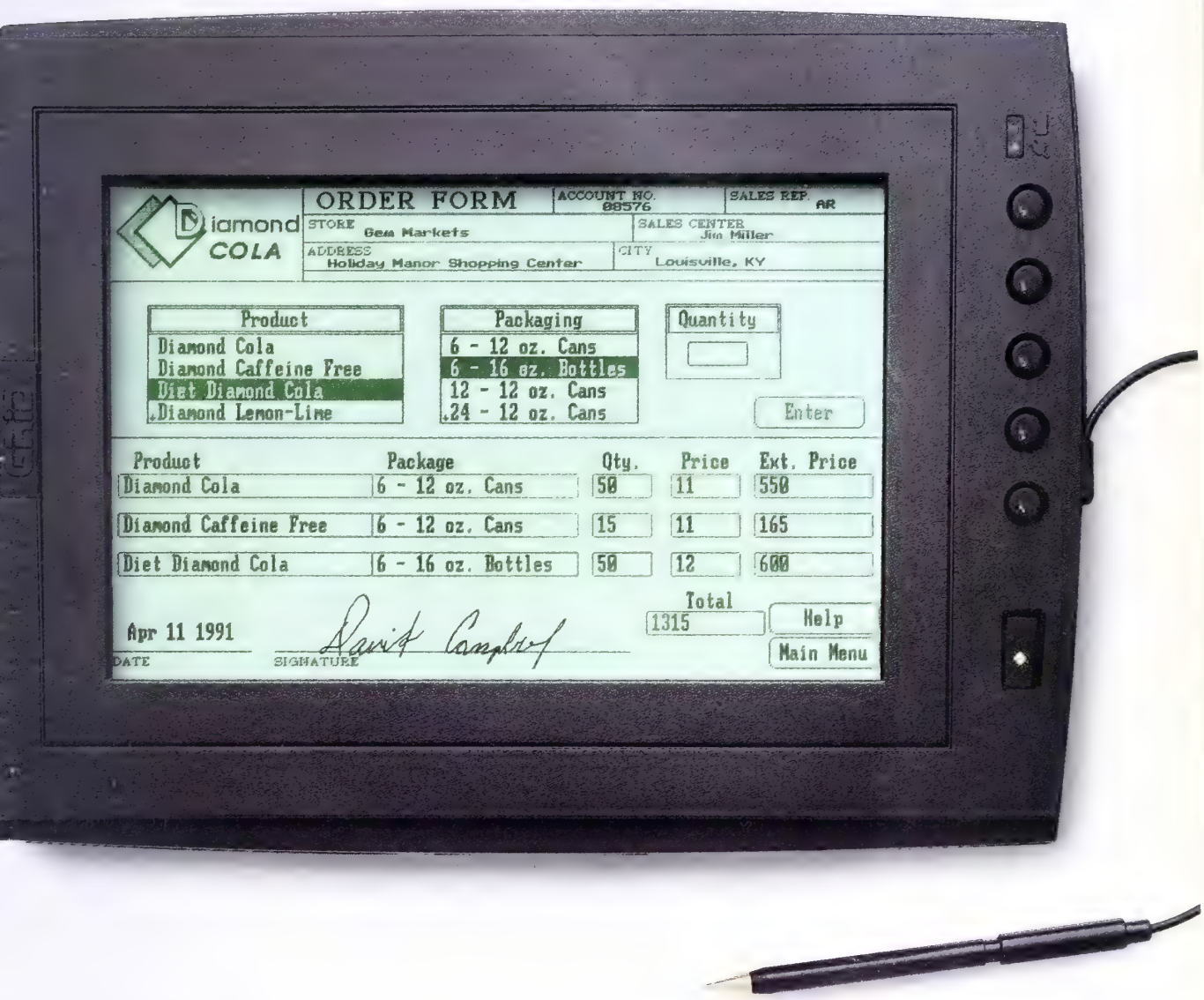
COMPANY	CEO	HQ	SALES ($MIL.)	PROFITS ($MIL.)	MKT VAL ($MIL.)	BORN	PLACE	COLLEGE/EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE: COMPANY	TENURE: CEO	TM
SNAP-ON TOOLS	ROBERT A. CORNOG	WI	985	101	1300	5/7/40	PA	BS IIT Tech 61	MBA U of Chicago 66	Production	0	0	
SOCIETY	ROBERT W. GILLESPIE	OH	1700	155	1700	3/26/44	OH	AB Ohio Wesleyan 66	MBA Case Western 68	Banking	24	4	
SONAT	RONALD L. KUEHN JR.	AL	1500	181	1900	4/6/35	NY	BS Fordham 57	LLB Fordham 64	Legal	21	7	
SONOCO PRODUCTS	CHARLES W. COKER	SC	1700	50	1500	5/10/33	SC	BA Princeton 55	MBA Harvard 57	Production	34	21	
SOTHEBY'S HOLDINGS	MICHAEL L. AINSLIE	NY	378	95	638	5/12/43	TN	BA Vanderbilt 65	MBA Harvard 68	Administration	7	7	
SOUTH CAROLINA NATIONAL	JAMES G. LINDLEY	SC	696	50	846	6/18/31	NC	BS U of N C 53	MS NYU 60	Finance	12	12	
SOUTHERN	EDWARD L. ADDISON	GA	8000	719	8600	2/13/30	SC	BS U of S C 50		Technical	38	8	
SOUTHERN INDIANA GAS & ELECTRIC	RONALD GILBERT REHERMAN	IN	323	38	430	8/19/35	IN	BS Evansville 56	MBA Sc Indiana 71	Technical	34	1	
SOUTHERN NEW ENGLAND TEL.	WALTER H. MONTEITH JR.	CT	1600	132	2000	9/19/30	MA	BA Amherst 52		Mktg Finance	37	7	
SOUTHLAND	CLARK J. MATTHEWS II	TX	8000	−301	807	10/1/36	MS	BA SMU 59	JD SMU 61	Legal	26	1	
SOUTHTRUST	WALLACE D. MALONE JR.	AL	868	70	770	8/3/36	AL	BS U of Ala 57	MBA Wharton 60	Finance	32	30	
SOUTHWEST AIRLINES	HERBERT D. KELLEHER	TX	1200	47	1000	3/12/31	NJ	BA Wesleyan 53	LLB NYU 56	Legal	24	10	
SOUTHWESTERN BELL	EDWARD E. WHITACRE JR.	MO	9100	1100	16500	11/4/40	TX	BS Tex Tech 64		Technical	28	2	
SOUTHWESTERN PUBLIC SERVICE	BILL D. HELTON	TX	769	109	1300	9/6/38	TX	BSEE Tex Tech 64		Technical	34	1	
SPIEGEL	JOHN J. SHEA	IL	2000	62	1000	3/1/36	NJ	BS LaSalle 59	MS U of Pittsburgh 60	Marketing	10	6	
SPRINGS INDUSTRIES	WALTER Y. ELISHA	SC	1900	−7	597	12/10/30	IN	BA Wabash 54	MBA Harvard 65	Mktg/Adm	12	10	
ST. JOE PAPER	WINFRED LaMOTTE THORNTON	FL	290	41	984	7/19/28	NC	MS VMI 50		Technical	24	0	
ST. JUDE MEDICAL	LAWRENCE A. LEHMKUHL	MN	175	65	2400	6/3/37	IA	BA U of Iowa 62	Northwestern	Finance/Ops	7	7	
ST. PAUL	DOUGLAS W. LEATHERDALE	MN	4000	349	2700	12/6/36	Canada	BA United 57		Finance	20	1	
STANDARD FEDERAL BANK	THOMAS R. RICKETTS	MI	911	40	473	3/4/31	MI	BBA U of Mich 53	JD U of Mich 57	Banking	35	18	
STANDARD REGISTER	JOHN K. DARRAGH	OH	716	22	402	10/22/29	OH	BS Ariz State 59	Ariz State	Finance Mgmt	17	8	
STANHOME	ALEJANDRO DIAZ VARGAS	MA	676	57	655	10/28/44	PR	BBA U Puerto Rico 66	Inter-American	Sales Mgmt	19	1	
STANLEY WORKS	RICHARD H. AYERS	CT	2000	107	1800	10/12/42	MA	BS MIT 65	MS MIT 65	Prodn/Ops	20	4	
STAR BANC	OLIVER W. WADDELL	OH	663	65	658	12/27/30	KY	BA Duke 54	LLB U of Ky 57	Banking	34	8	
STATE STREET BOSTON	WILLIAM S. EDGERLY	MA	1300	177	2100	2/18/27	ME	BS MIT 49	MBA Harvard 55	Tech/Prodn	16	16	
STEWART & STEVENSON SERVICES	BOB H. O'NEAL	TX	646	29	726	10/6/34	TX	BA East Tex State 56		Management	27	1	
STONE & WEBSTER	WILLIAM F. ALLEN JR.	NY	232	8	447	6/22/19	PA	ScB Brown 41	MS Harvard '47	Technical	43	5	
STONE CONTAINER	ROGER WARREN STONE	IL	5800	95	1800	2/16/35	IL	BS Wharton 57		Marketing/Ops	34	10	
STORAGE TECHNOLOGY	RYAL ROBERT POPPA	CO	1100	71	1700	11/7/33	ND	BS Claremont McKenna 57		Marketing	7	7	
STRATUS COMPUTER	WILLIAM E. FOSTER	MA	404	37	833	4/20/44	CA	BA San Jose State 66	MS 69 MBA 74 Santa Clara	Technical	12	12	
STRIDE RITE	ERVIN R. SHAMES	MA	516	56	1400	7/6/40	IA	BSBA U of Fla 62	MBA Harvard 66	Marketing	1	1	
STRUCTURAL DYNAMICS RESEARCH	RONALD J. FRIEDSAM	OH	119	13	559	6/30/43	NY	BS NYU 65		Marketing	5	5	
STRYKER	JOHN WILFORD BROWN	MI	281	24	1400	9/15/34	TN	BS Auburn 57		Administration	15	15	
STUDENT LOAN MARKETING ASSN.	LAWRENCE A. HOUGH	DC	3600	380	6300	4/4/44	WI	BS Stanford 66	MS MIT 72	Finance	18	1	
SUN	ROBERT H. CAMPBELL	PA	11800	199	3400	6/11/37	PA	BCE Princeton 59	MS Carnegie-Mellon '61; MS MIT 78	Technical	31	0	
SUN MICROSYSTEMS	SCOTT G. McNEALY	CA	2500	301	3300	11/13/54	IN	BA Harvard 76	MBA Stanford 80	Production	10	6	

EXECUTIVE TO WATCH

▶ Although his company is the undisputed leader in workstation computer systems, he's looking anxiously over his shoulder nowadays. Apple and IBM are collaborating on workstation technology, as are Compaq, Digital Equipment, and Microsoft. Worse, some of its offerings are starting to grow long in the tooth. He's striking back: The company recently unveiled a plan to make its operating system flexible enough to run on IBM-compatibles.

SUNDSTRAND	HARRY C. STONECIPHER	IL	1600	76	1200	5/16/36	TN	BS Tenn. Poly 60		Technical	5	3	
SUNTRUST BANKS	JAMES B. WILLIAMS	GA	3400	350	4400	3/21/33	TN	AB Emory 55		Finance	36	1	
SUPER VALU STORES	MICHAEL W. WRIGHT	MN	7600	155	2000	6/13/38	MN	BA U. of Minn. 61	LLB U. of Minn. 63	Legal	15	10	
SURGICAL CARE AFFILIATES	JOEL C. GORDON	TN	124	11	1200	7/5/29	KY	BS U of Ky 51		Mktg/Mgmt	9	9	
SYMANTEC	GORDON E. EUBANKS JR.	CA	176	5	583	11/7/46	MA	BS Ohio State 68	MS Naval Postgrad. '76	Technical	8	5	
SYMBOL TECHNOLOGIES	JEROME SWARTZ	NY	281	5	572	5/14/40	NY	BS CCNY 61	PhD Polytech N.Y. '68	Technical	18	6	
SYNERGEN	JON S. SAXE	CO	5	−6	563	7/17/36	NY	BS Carnegie-Mellon '57	JD Geo. Washington '60	Legal	2	2	
SYNOPTICS COMMUNICATIONS	ANDREW K. LUDWICK	CA	176	28	521	10/30/45	OH	BA Harvard 67	MBA Harvard 69	Marketing	6	6	
SYNOVUS FINANCIAL	JAMES HUBERT BLANCHARD	GA	391	35	585	6/20/41	GA	BBA U of Ga 63	LLB U. of Ga 65	Banking	27	5	
SYNTEX	PAUL E. FREIMAN	CA	1500	340	10100	7/23/34	NY	BS Fordham 55		Marketing	29	2	
SYSCO	JOHN F. WOODHOUSE	TX	7600	132	4300	11/30/30	DE	BA Wesleyan '53	MBA Harvard '55	Finance	22	9	
TAMBRANDS	MARTIN FREDERICK C. EMMETT	NY	632	98	2300	8/30/34	S Africa	BS Witwatersrand '57	MBA Queen's (Canada) 62	Marketing	2	2	
TANDEM COMPUTERS	JAMES G. TREYBIG	CA	1900	122	1400	9/28/40	TX	BA 65 BSEE 64 Rice	MBA Stanford 68	Mktg/Finance	17	17	
TANDY	JOHN V. ROACH	TX	4500	290	2300	11/22/38	TX	BA TCU 61	MBA TCU 65	Marketing	24	10	
TCA CABLE TV	ROBERT M. ROGERS	TX	114	5	392	8/31/26	MO	William Jewell		Technical	37	37	
TECO ENERGY	TIMOTHY L. GUZZLE	FL	1100	143	2100	11/4/36	IA	BS 58, MS '59, U. of Oklo	PhD TCU 65	Technical	4	2	
TECUMSEH PRODUCTS	TODD WESLEY HERRICK	MI	1300	14	500	11/29/40	MI	BA Notre Dame 61		Tech/Prodn	19	5	

Go ahead, form your own opinion.



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COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PA THI
TEKTRONIX	JEROME J. MEYER	OR	1300	48	874	2/18/38	MN	BA, U. of Minn. '60		Technical	1	1	7
TELE-COMMUNICATIONS	JOHN C. MALONE	CO	3600	−287	4800	3/7/41	CT	BS, Yale '63	MS, NYU '65; MS '64/ PhD '67, Johns Hopkins	Tech/Finance	18	18	4
TELEDYNE	WILLIAM PHILIP RUTLEDGE	CA	3400	69	1100	1/6/42	PA	BS, Layayette '63	MS, Geo. Washington '67	Production	6	1	5
TELEFLEX	LENNOX KINGMAN BLACK	PA	441	29	531	3/27/30	Canada	BComm., McGill '52		Mktg/Finance	33	21	
TELEPHONE & DATA SYSTEMS	LEROY T. CARLSON JR.	IL	295	27	1200	9/27/46	IL	BS, Harvard '68	MBA, Harvard '71	Finance	17	5	2
TEMPLE-INLAND	CLIFFORD J. GRUM	TX	2400	232	2600	12/12/34	IA	BA, Austin '56	MBA, Wharton '58	Fin/Publish	23	8	7
TENNECO	MICHAEL HARRIES WALSH	TX	14500	561	5000	7/8/42	NY	BA, Stanford '64	LLB, Yale '69	Administration	0	0*	
TERADYNE	ALEXANDER V. D'ARBELOFF	MA	459	−21	419	12/21/27	France	BS, MIT '49		Marketing	31	20	4
TEXACO	JAMES W. KINNEAR	NY	40900	1500	16600	3/21/28	PA	BS, U.S. Naval Acad. '50		Marketing	37	5	19
TEXAS INSTRUMENTS	JERRY R. JUNKINS	TX	6600	−39	2600	12/9/37	IA	BS, Iowa State '59	MS, SMU '68	Production	32	6	5
TEXAS UTILITIES	JERRY S. FARRINGTON	TX	4500	969	7700	7/7/34	TX	BBA, U of North Tex. '55	MBA, U of North Tex. '58	Administration	34	5	6
TEXTRON	BEVERLY F. DOLAN	RI	7900	283	2800	11/9/27	GA	BS, U. of Ga '52		Production	37	7	25
THERMO ELECTRON	GEORGE NICHOLAS HATSOPOULOS	MA	708	34	955	1/7/27	Greece	BS '49/MS '50, MIT	ME '54/ScD '56, MIT	Technical	35	35	6
THERMO INSTRUMENT SYSTEMS	ARVIN H. SMITH	NM	285	19	648	5/16/29	TX	BS, TCU '59		Technical	21	5	
THOMAS & BETTS	T. KEVIN DUNNIGAN	NJ	599	48	916	1/31/38	Canada	AB, Loyola '71		Marketing	29	7	
TIDEWATER	JOHN PETER LABORDE	LA	246	32	460	11/5/23	LA	BS, La. State '47	JD, La. State '49	Operations	35	35	4
TIFFANY	WILLIAM R. CHANEY	NY	456	37	814	7/31/32	KS	BS, U. of Kan. '53		Mktg/Sales	8	7	6
TIME WARNER	STEVEN J. ROSS	NY	11500	−227	4800	9/19/27	NY	AB, Paul Smith '48		Operations	2	2	2

EXECUTIVE TO WATCH

▶ A Brooklyn boy dreams of a vertically integrated media empire, with partners in Europe and Japan—but the hoped-for synergies from his 1989 Warner merger haven't materialized. Has finally inked the first foreign tie-up deal, with Japanese partners Toshiba and C. Itoh. But he needs to pare massive merger debt. A recent $2.7 billion rights offering helped, as did chopping 600 jobs from his magazine group. His compensation package turned heads.

TIMES MIRROR	ROBERT F. ERBURU	CA	3600	180	4200	9/27/30	CA	BA, USC '52	JD, Harvard '55	Legal	30	10	
TIMKEN	W. R. TIMKEN JR.	OH	1700	55	860	12/21/38	OH	BA, Stanford '60	MBA, Harvard '62	Administration	29	16	
TJX	BERNARD CAMMARATA	MA	2400	74	1400	2/7/40	NY			Marketing	14	14	
TOKOS MEDICAL	ROBERT F. BYRNES	CA	75	−3	512	9/30/44	NY	BS, Ferris State '67	MBA, Loyola '70	Marketing	7	7	
TOOTSIE ROLL INDUSTRIES	MELVIN J. GORDON	IL	194	23	567	1/1/19	MA	AB, Harvard '41	MBA, Harvard '43	Management	29	29	
TOPPS	ARTHUR T. SHORIN	NY	290	54	674	6/10/35	NY	BS, NYU '58		Marketing	34	12	
TORCHMARK	RONALD K. RICHEY	AL	1800	229	2600	6/16/26	KS	BA, Washburn '49	LLB, Washburn '51	Legal	28	7	1
TOSCO	THOMAS D. O'MALLEY	CA	2200	123	665	1/20/41	NY	BS, Manhattan '63		Trading	2	2	2
TOTAL SYSTEM SERVICES	RICHARD W. USSERY	GA	84	13	427	5/7/47	GA	BS, Auburn '69		Technical/Ops	26	9	
TOYS 'R' US	CHARLES P. LAZARUS	NJ	5500	326	10200	10/4/23	DC			Entrepreneur	43	43	5
TRANSAMERICA	FRANK C. HERRINGER	CA	6700	266	2700	11/12/42	NY	AB, Dartmouth '64	MBA, Amos Tuck '65	Administration	13	0	
TRANSATLANTIC HOLDINGS	MAURICE RAYMOND GREENBERG	NY	580	62	789	5/4/25	NY	Cert., U. of Miami '48	LLB, N.Y. Law '50	Insurance	5	5	
TRANSCO ENERGY	JOHN P. DesBARRES	TX	3100	41	858	7/8/39	MA	AA, Worcester JC '60		Marketing	0	0	
TRAVELERS	EDWARD H. BUDD	CT	11300	−178	1900	4/30/33	OH	BS, Tufts '55		Insurance	36	10	
TRIBUNE	CHARLES T. BRUMBACK	IL	2400	−64	3000	9/27/28	OH	AB, Princeton '50	U. of Toledo	Finance	10	1	
TRINITY INDUSTRIES	W. RAY WALLACE	TX	1300	30	559	3/25/23	LA	BS, La. Tech '44		Management	45	33	
TRINOVA	DARRYL F. ALLEN	OH	2000	45	709	9/7/43	MI	BA, Mich. State '65	MBA, U. of Mich. '66	Finance	19	5	
TRITON ENERGY	WILLIAM I. LEE	TX	236	5	814	10/8/26	NC	U. of Okla.		Operations	25	25	
TRW	JOSEPH T. GORMAN	OH	8200	208	2700	10/1/37	IN	BA, Kent State '59	LLB, Yale '62	Legal/Mgmt	23	3	
T^2 MEDICAL	THOMAS EDWIN HAIRE	GA	71	15	2000	8/13/44	MI	BS, Central Mich. '66		Marketing	7	2	
TURNER BROADCASTING SYSTEM	ROBERT EDWARD TURNER	GA	1400	−16	2400	11/19/38	OH	Brown		Communs	28	28	
20TH CENTURY INDUSTRIES	LOUIS WILLIAM FOSTER	CA	800	99	1100	3/9/13	MI	BA, Stanford '35		Marketing	33	33	
TYCO LABORATORIES	JOHN FRANKLIN FORT	NH	2100	119	1900	10/12/41	NY	BS, Princeton '63	MS, MIT '66	Tech/Ops	27	9	
TYSON FOODS	LELAND E. TOLLETT	AR	3923	145	2600	1/21/37	AR	BS, U. of Ark. '58	MS, U. of Ark. '59	Production	33	0	
UAL	STEPHEN M. WOLF	IL	11000	94	3300	8/7/41	CA	BA, San Fran. State '65		Marketing	4	4	
UGI	JAMES A. SUTTON	PA	433	19	396	6/29/34	IN	BS, Purdue '57		Management	9	6	
UJB FINANCIAL	T. JOSEPH SEMROD	NJ	1400	−6	719	12/13/36	OK	BS, U. of Okla. '58	LLB, U. of Okla. '63	Banking	10	10	
UNIFI	WILLIAM T. KRETZER	NC	399	26	732	7/5/46	PA	BA, N.C. State '68		Marketing	20	6	
UNION BANK	TAISUKE SHIMIZU	CA	1700	146	711	4/8/36	Japan	AB, U. of Tokyo '59		Finance	6	1	
UNION CAMP	RAYMOND E. CARTLEDGE	NJ	2800	230	3100	6/12/29	FL	BS, U. of Ala. '52		Marketing	35	6	
UNION CARBIDE	ROBERT DELMONT KENNEDY	CT	7600	308	2700	11/8/32	PA	BS, Cornell '55		Marketing	36	5	
UNION ELECTRIC	WILLIAM E. CORNELIUS	MO	2000	294	3200	9/6/31	UT	BS, U. of Mo. '53	MA, Wash. U. (Mo.) '83	Finance	29	7	
UNION PACIFIC	ANDREW (DREW) L. LEWIS	PA	7000	618	8900	11/3/31	PA	BS, Haverford '53	MBA, Harvard '55	Finance	5	4	
UNION TEXAS PETROLEUM	A. CLARK JOHNSON	TX	1300	116	1700	12/7/30	PA	BA, Haverford '52	MBA, Wharton '54	Production	23	6	
UNISYS	JAMES A. UNRUH	PA	10100	−437	930	3/22/41	ND	BS, Jamestown '63	MBA, U. of Denver '64	Finance	10	1	

* Becomes CEO Jan. 1, 1992

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—BusinessWeek

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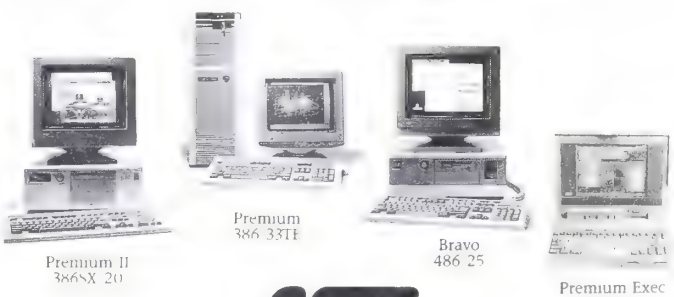

Premium II 386SX/20 — Premium 386/33TE — Bravo 486/25 — Premium Exec 386SX/20

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COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	PA TH
UNITED ARTISTS ENTERTAINMENT	STEWART D. BLAIR	CO	1500	−159	1900	5/10/49	Scotland	BS, U. of Glasgow '71	MA, U. of Glasgow '71	Finance	5	5	
UNITED ASSET MANAGEMENT	NORTON [illegible] REAMER	MA	170	18	416	9/21/35	NY	AB/BEE, Union '58	MBA, Harvard '60	Finance	11	11	
UNITED HEALTHCARE	WILLIAM [illegible] McGUIRE	MN	591	34	1600	4/15/48	NY	BA U. of Tex '70	MD, U Tex. Medical '74	Medical	3	1	
UNITED ILLUMINATING	RICHARD J. GROSSI	CT	594	54	474	8/22/35	CT	BS, U. of Conn. '57	MBA, U. of New Haven '81	Technical	34	0	
UNITED INVESTORS MANAGEMENT	[illegible]	AL	259	60	674	6/16/26	KS	BA, Washburn '49	LLB, Washburn '51	Legal	0	0	
UNITED MISSOURI BANCSHARES	RUFUS CROSBY KEMPER	MO	407	37	432	2/22/27	MO	U. of Mo.		Finance	41	33	
UNITED TECHNOLOGIES	ROBERT F. DANIELL	CT	21600	751	5800	10/31/33	MA	AS, Boston U. CIT '54		Tech/Mktg	35	6	1

EXECUTIVE TO WATCH

▶ He's putting this conglomerate through some much-needed engine work. The recession ar airline consolidation are hammering its Pratt & Whitney engine unit (accounting for two-third of operating income), while competition from GE and Rolls Royce is brutal. The real estate slump has dampened demand for its Otis elevators, and Carrier's air-conditioner business is sputtering, too. Has ambitious plans to squeeze $1 billion from overhead.

UNITED TELECOMMUNICATIONS	WILLIAM T. ESREY	KS	8300	309	5700	1/17/40	PA	BA, Denison '61	MBA, Harvard '64	Finance	12	6	
UNITRIN	JERROLD V. JEROME	IL	1200	132	2000	9/13/29	WA	BS, Linfield '52	MBA, Stanford '59	Finance	2	2	
UNIVERSAL	HENRY HOWZE HARRELL	VA	2800	37	731	9/18/39	VA	AB, Washington & Lee '61		Sales/Mktg	25	3	
UNIVERSAL FOODS	GUY A. OSBORN	WI	839	49	961	2/18/36	IL	BS, Northwestern '58		Marketing	20	3	
UNOCAL	RICHARD J. STEGEMEIER	CA	10600	401	6300	4/1/28	IL	BS, Missouri/Rolla '50	MS, Tex. A&M '51	Tech/Prodn	40	3	
UNOCAL EXPLORATION	H. D. MAXWELL	CA	913	163	3000	12/24/31	TX	BS, Tex. A&M '59	MS, Tex. A&M '60	Technical	31	1	
UNUM	JAMES F. ORR III	ME	2200	185	2100	3/5/43	MN	BS, Villanova '65	MBA, Boston U. '70	Finance	5	4	1
UPJOHN	THEODORE COOPER	MI	3000	458	7900	12/28/28	NJ	BS, Georgetown '49	MD '54/PhD '56, St. Louis	Medicine/Adm	11	4	1
U.S. BANCORP	ROGER L. BREEZLEY	OR	1900	183	1900	4/1/38	ND	BSBA, U. of N.D. '60		Finance	14	4	
U.S. BIOSCIENCE	PHILIP S. SCHEIN	PA	0	−5	626	5/10/39	NJ	AB, Rutgers '61	MD, Upstate Medical '65	Research	4	4	
U.S. CELLULAR	H. DONALD NELSON	IL	63	−15	627	11/23/33	IL	BS, Northwestern '55	MBA, Northwestern '59	Marketing	8	5	
U.S. HEALTHCARE	LEONARD ABRAMSON	PA	1300	78	2000	11/12/32	PA	BA, Penn State '54; BS, Phila P&S '60	MPA, Nova '78	Adm/Corp dev	15	15	1
U.S. SHOE	BANNUS B. HUDSON	OH	2700	−28	701	8/24/45	KS	BS, U. of Kan. '68		Marketing	6	2	
U.S. SURGICAL	LEON C. HIRSCH	CT	514	46	3700	7/20/27	NY	CCNY		Marketing	27	27	
US WEST	RICHARD D. McCORMICK	CO	10000	1200	14500	7/4/40	IA	BS, Iowa State '61		Operations	30	1	
USAIR GROUP	SETH E. SCHOFIELD	VA	6600	−454	570	8/22/39	CT			Operations	34	0	
USF&G	NORMAN P. BLAKE JR.	MD	4200	−461	568	11/8/41	NY	BA, Purdue '66	MA, Purdue '67	Finance	1	1	
USLIFE	GORDON EUGENE CROSBY JR.	NY	1200	69	629	11/14/20	IA	U. of Mo.		Marketing	32	25	1
UST	LOUIS F. BANTLE	CT	751	223	5100	11/22/28	CT	BS, Syracuse '51		Marketing	29	6	2
USX–MARATHON GROUP	CHARLES A. CORRY	PA	13300	508	8400	2/14/32	OH	BA, U. of Cincinnati '55	JD, U. of Cincinnati '59	Finance	32	32	1
USX–U. S. STEEL GROUP	CHARLES A. CORRY	PA	6100	310	1500	2/14/32	OH	BA, U. of Cincinnati '55	JD, U. of Cincinnati '59	Finance	32	32	al
UTILICORP UNITED	RICHARD C. GREEN JR.	MO	894	59	745	5/6/54	MO	BS, SMU '76		Finance	24	6	
VALERO ENERGY	WILLIAM EUGENE GREEHEY	TX	1200	95	1000	6/9/36	IA	BBA, St. Mary's '60		Finance	28	17	
VALHI	HAROLD CLARK SIMMONS	TX	1700	74	1000	5/13/31	TX	BA, U. of Tex. '51	MA, U. of Tex. '52	Entrepreneur	9	9	2
VALLEY NATIONAL	RICHARD JOHN LEHMANN	AZ	1100	8	596	4/9/44	OR	BS, U of Wash. '67	MBA, U. of Wash. '69	Finance	3	2	
VALSPAR	C. ANGUS WURTELE	MN	571	27	465	8/25/34	MN	BA, Yale '56	MBA, Stanford '61	Production	29	21	
VANGUARD CELLULAR SYSTEMS	HAYNES GLENN GRIFFIN	NC	64	−29	520	3/3/47	NC	BA, Princeton '69		Entrepreneur	8	7	
VARIAN ASSOCIATES	J. TRACY O'ROURKE	CA	1300	13	767	3/14/35	SC	BS, Auburn '56		Mktg/Tech	2	2	
VENTURE STORES	JULIAN M. SEEHERMAN	MO	1400	34	421	12/21/29	PA	BS, Syracuse '51		Marketing	14	8	
VF	LAWRENCE R. PUGH	PA	2600	81	1900	1/22/33	NY	BA, Colby '56		Marketing	12	10	
VIACOM	FRANK J. BIONDI JR.	NY	1600	−90	3500	1/9/45	NY	BA, Princeton '66	MBA, Harvard '68	Mktg/Finance	4	4	
VICOR	PATRIZIO VINCIARELLI	MA	37	5	433	10/26/46	Italy		PhD, U. of Rome '70	Technical	10	10	
VISTA CHEMICAL	JOHN DUDLEY BURNS	TX	719	59	578	5/18/33	TX	BS, Rice '56		Production	7	7	
VONS	ROGER E. STANGELAND	CA	5300	50	1300	10/4/29	IL	BS, U. of Ill. '51		Marketing	31	6	
VULCAN MATERIALS	HERBERT ANTHONY SKLENAR	AL	1100	120	1400	6/7/31	NE	BS, Nebraska/Omaha '52	MBA, Harvard '54	Finance	19	5	
WABAN	JOHN F. LEVY	MA	2400	18	672	1/20/47	MA	BA, Trinity '69	MBA, Harvard '73	Marketing	18	2	
WACHOVIA	JOHN G. MEDLIN JR.	NC	2500	297	4100	11/23/33	NC	BS, U. of N.C. '56		Operations	32	15	
WAL-MART STORES	DAVID D. GLASS	AR	32600	1300	58100	9/2/35	MO	BS, Southwest Mo. '59		Finance	15	4	
WALGREEN	CHARLES R. WALGREEN III	IL	6000	175	4200	11/11/35	IL	BS, U. of Mich. '58		Marketing/Ops	39	20	
WALLACE COMPUTER SERVICES	THEODORE DIMITRIOU	IL	449	40	453	8/31/26	OH	AB, Miami U. (Ohio) '50		Tech/Prodn	32	17	
WANG LABORATORIES	RICHARD W. MILLER	MA	2091	−378	501	11/22/40	NY	BBA, Case Western '67	MBA, Harvard '70	Finance	2	2	
WARNER-LAMBERT	MELVIN R. GOODES	NJ	4700	485	9800	4/11/35	Canada	BC, Queen's (Canada)	MBA, U. of Chicago '60	Marketing	26	0	
WASHINGTON ENERGY	JAMES A. THORPE	WA	364	21	446	4/19/29	MA	BS, Northeastern '51		Technical	24	17	
WASHINGTON GAS LIGHT	DONALD J. HEIM	DC	736	50	608	12/10/27	PA	BME, U. of Va. '50		Planning/Ops	41	10	
WASHINGTON POST	DONALD E. GRAHAM	DC	1400	175	2700	4/22/45	MD	BA, Harvard '66		Journalism	20	0	

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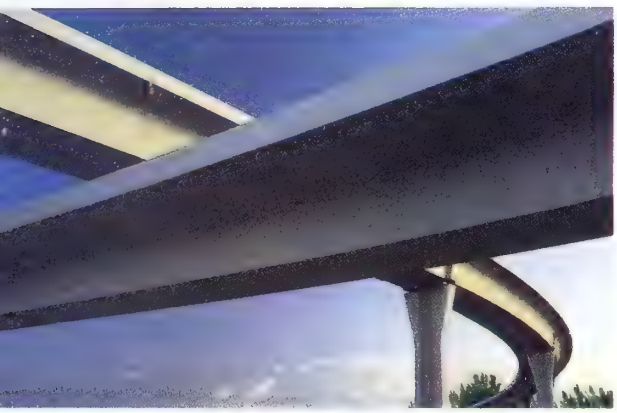

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THE CORPORATE ELITE

COMPANY	CEO	HDQ LOC	SALES $ MIL	PROFITS $ MIL	MKT VAL $ MIL	BORN	PLACE	COLLEGE EDUCATION	GRADUATE STUDY	CAREER PATH	TENURE COMPANY	TENURE CEO	P. TH
WASHINGTON WATER POWER	PAUL ANTHONY [illegible] REDMOND	WA	554	72	745	1/23/37	OR	BS, Gonzaga '65		Technical	26	7	
WASTE MANAGEMENT	DEAN L. [illegible]NTROCK	IL	6000	709	19400	6/6/31	SD	BA, St Olaf '55		Entrepreneur	23	23	1
WATTS INDUSTRIES	TIMOTHY P. HORNE	MA	292	28	678	4/4/38	MA	BA, Trinity '59		Operations	32	13	
WAUSAU PAPER MILLS	ARNOLD M. NEMIROW	WI	340	16	483	3/25/43	CT	AB, Harvard '66	JD, U of Mich '69	Legal	1	1	
WEINGARTEN REALTY	STANFORD J. ALEXANDER	TX	77	16	478	8/15/28	TX	BS, U. of Tex. '49	MBA, Harvard '52	Marketing	36	29	
WEIS MARKETS	SIGFRIED WEIS	PA	1300	87	1300	2/18/16	PA	BA, Yale '38		Administration	52	31	
WELLMAN	THOMAS MICHAEL DUFF	NJ	828	62	834	7/30/47	NJ	BA, Rutgers '70		Adm/Mgmt	20	6	
WELLS FARGO	CARL E. REICHARDT	CA	6000	712	3900	7/6/31	TX	AB, USC '56		Finance	21	9	1
WENDY'S INTERNATIONAL	JAMES WHITNEY NEAR	OH	1000	39	885	3/19/38	OH	BS, Hanover '61		Management	17	1	
WESCO FINANCIAL	CHARLES T. MUNGER	CA	123	25	401	1/1/24	NE	U. of Mich., Cal. Tech	JD, Harvard '48	Legal	8	8	
WEST ONE BANCORP	DANIEL R. NELSON	ID	465	43	410	8/12/37	WA	BBA, Wash. State '62		Finance	7	5	
WEST POINT-PEPPERELL	WILLIAM FARLEY	IL	1200	2	849	10/10/42	RI	AB, Bowdoin '64	JD, Boston Coll. '69	Finance	2	2	
WESTINGHOUSE ELECTRIC	PAUL E. LEGO	PA	12900	268	7000	5/16/30	PA	BS, U. of Pittsburgh '56	MS, U. of Pittsburgh '58	Technical	35	1	

EXECUTIVE TO WATCH

▶ This chief is fighting brushfires at his financial-services unit, battered by a nightmarish portfolio of commercial real estate loans. Has already taken two staggering charges (rough $2.6 billion in all) to cover bad-loan losses. Plans to dump 4,000 workers from payroll, too. raise cash, company may be forced to sell off assets, although he won't say which. The recession is also pinching the company's assorted industrial and broadcast properties.

WESTVACO	JOHN A. LUKE	NY	2400	188	2400	11/30/25	PA	BS, Yale '48		Production	42	3	
WETTERAU	TED C. WETTERAU	MO	5700	51	603	11/13/27	MO	BA, Westminster '52		Adm/Ops	39	21	
WEYERHAEUSER	JOHN W. CREIGHTON JR.	WA	9000	394	5600	9/1/32	PA	BS '54/JD '57 Ohio State	MBA, U. of Miami '65	Finance	21	0	
WHEELABRATOR TECHNOLOGIES	PHILLIP B. ROONEY	IL	1200	47	2300	7/8/44	IL	BA, St. Bernard '66		Administration	3	1	
WHIRLPOOL	DAVID R. WHITWAM	MI	6600	72	2600	1/30/42	WI	BS, U of Wis '67	U. of Wis.	Marketing	23	4	
WHITMAN	JAMES W. COZAD	IL	2300	−31	1400	2/10/27	IN	BS, Indiana '50		Marketing	2	2	
WILLAMETTE INDUSTRIES	WILLIAM SWINDELLS	OR	1900	130	1500	9/16/30	CA	BS, Stanford '53		Production	38	12	
WILLIAMS	JOSEPH HILL WILLIAMS	OK	1800	77	1400	6/2/33	OK	BA, Yale '56		Operations	32	13	
WILMINGTON TRUST	BERNARD J. TAYLOR II	DE	428	67	911	11/10/25	PA	BS, Wharton '49		Finance	12	12	
WINN-DIXIE STORES	A. DANO DAVIS	FL	9700	153	2900	6/2/45	NY	Stetson		Marketing	23	9	
WISCONSIN ENERGY	RICHARD ANTHONY ABDOO	WI	1400	193	2400	1/27/44	MI	BS, U. of Dayton '65	MA, U. of Detroit '69	Technical	16	0	
WISCONSIN PUBLIC SERVICE	DANIEL ARTHUR BOLLOM	WI	589	49	595	4/25/36	WI	BBA, U. of Wis. '58	Wisconsin/Oshkosh	Finance	33	1	
WITCO	WILLIAM R. TOLLER	NY	1600	68	836	8/10/30	AR	BS, U of Ark '56		Finance	7	1	
WOOLWORTH	HAROLD E. SELLS	NY	9800	317	4000	7/15/28	AR			Marketing	46	5	
WORTHINGTON INDUSTRIES	JOHN H. McCONNELL	OH	875	45	1100	5/10/23	WV	BA, Mich. State '49		Mktg/Prodn	36	18	
WPL HOLDINGS	ERROLL B. DAVIS JR.	WI	618	63	753	8/5/44	PA	BS, Carnegie-Mellon '65	MBA, U. of Chicago '67	Finance	13	1	
WRIGLEY (WM.) JR.	WILLIAM WRIGLEY	IL	1100	117	2500	1/21/33	IL	BA, Yale '54		Administration	35	31	
XEROX	PAUL ARTHUR ALLAIRE	CT	17000	605	5400	7/21/38	MA	BS, Worcester Poly '60	MS, Carnegie-Mellon '66	Finance	25	1	
XILINX	BERNARD V. VONDERSCHMITT	CA	98	16	689	10/14/23	IN	BS, Rose-Hulman '44	MSEE, MBA, U. of Pa. '56	Technical	8	8	
XOMA	STEVEN C. MENDELL	CA	20	−24	492	9/11/41	CA	BA, Cal/Santa Barbara '63	BIM, American GSIM '69	International	7	6	
YELLOW FREIGHT SYSTEM	GEORGE E. POWELL III	KS	2300	65	871	10/18/48	MO	BS, Indiana '70	Indiana	Ops/Mgmt	21	1	
ZURN INDUSTRIES	GEORGE H. SCHOFIELD	PA	697	31	477	11/18/29	NJ	BS, U. of Vt. '51		Finance	7	6	

HOW TO READ THE CEO TABLES

THE CHIEF EXECUTIVES whose entries appear in these tables were selected on the basis of the market values of their companies as of Aug. 30, 1991. The companies included in these tables are substantially the same as those ranked in the 1991 BUSINESS WEEK 1000 Special Issue (Apr. 5). New companies have been added to the list to replace those no longer publicly traded because they were merged or reorganized.

The information that appears in each CEO entry was compiled from a variety of sources. Most of the biographical material was supplied directly by each executive or by a designated official in his company in response to a BUSINESS WEEK questionnaire. Standard & Poor's Compustat Services Inc. supplied all the data on sales, profits, and market value. Compensation figures were taken directly from the most recent proxy statements or from direct company sources.

SALES AND PROFITS. The numbers in the BUSINESS WEEK Corporate Elite tables reflect the most recent fiscal year for which complete data were available. For most companies, they exclude other income and ex cise taxes, as well as the financial results of unconsolidated subsidiarie Profits are defined as aftertax earnings from continuing operations-b fore extraordinary items. For companies in financial industries (bank insurance, etc.), revenues may include investment income; for insuranc companies, net income is defined as net aftertax operating income.

MARKET VALUE. This calculation is based on share prices as of stoc market close, Aug. 30, 1991, and the latest available number of share outstanding.

COMPENSATION. The amount shown is salary and short-term bon as reported to the Securities & Exchange Commission. Long-term cor pensation is normally excluded.

TENURE. When the exact month and year of company or CEO tenur is available, years of tenure are rounded upward if months of servic are seven or more.

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RAGING BULL

THE TRIMMER NEW LOOK OF MERRILL LYNCH

If only: Invariably, the most frequently repeated comments about Merrill Lynch & Co. begin with these two words. *If only Merrill Lynch got its act together, if only it could realize the potential of its mammoth franchises.*

Merrill has always taken great pride in its size. It is the largest U. S. underwriter, employs the most retail brokers, and holds more individual assets—$413 billion—than any other U. S. financial institution. Merrill's bottom line, though, has been far less awesome. Powerful but awkward and overweight, the firm was hobbled by a costly, bloated bureaucracy. Its senior executives were widely regarded as among the least imaginative and venturesome on Wall Street.

The consequence was a return on equity and a stock price that lagged far below those of rivals. The huge stock market bonanza of the 1980s never trickled down to Merrill's shareholders. In early 1989, with its stock trading at $18, vs. today's $56, a group of investors assembled a preliminary bid for the firm. The group, led by former Merrill executives with support from a Japanese securities firm and a U. S. financial firm, disbanded when such executives as former Merrill chief Donald T. Regan turned down their offer to head the takeover bid.

SEA CHANGE. Today, there are clear indications that Merrill is remaking itself. Led by Chief Executive Officer William A. Schreyer, 63, an ebullient, unpretentious, former stockbroker, and heir apparent Daniel P. Tully, 59, who is president and chief operating officer, the giant firm is busily trying to abolish its lax, free-spending culture. In the last two years, Merrill has cut costs by well over $400 million, reduced its head count from 48,000 to 37,000—largely by getting rid of managerial and support staff—and divested itself of several underperforming divisions.

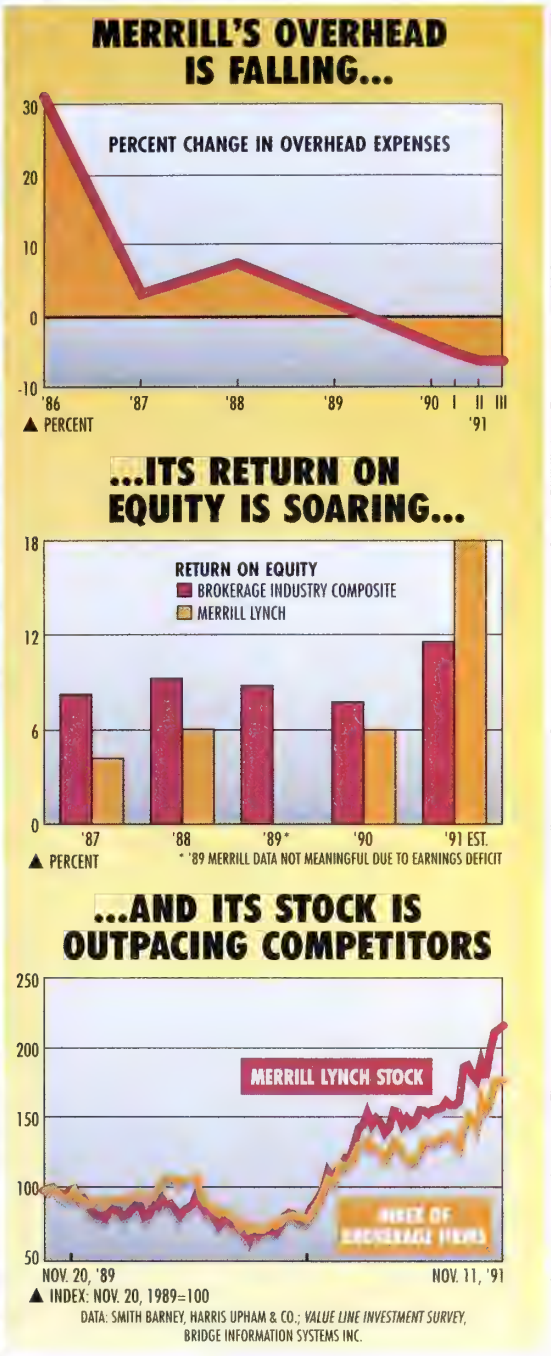
More fundamentally, the firm is pushing employees to focus on profits instead of size. Merrill has installed internal controls and risk-management systems, eliminated superfluous management layers, and is taking a more disciplined approach to its businesses, a move that could permanently lower its hefty cost structure.

Signs of Merrill's transformation abound. In the first three quarters of 1991, the company earned a record $525 million, more than it ever made before in an entire year. Virtually all Wall Street firms, of course, are reaping the revenue benefits of the buoyant stock market. But Merrill is doing better than most in transforming volume into profits. From a year ago through the third quarter of 1991, Merrill has boosted its return on equity to 20% from 6% and its margins from 2.6% to 7.7%. In the third quarter of this year, its costs as a percentage of revenues were 87%, the lowest of all large retail brokers except Dean Witter Reynolds Inc. Says Schreyer, who became CEO six years ago, "What's different this time is we've streamlined the organization."

At a time when the credit ratings of numerous financial institutions are being downgraded, Moody's Investors Service on Nov. 8 upgraded Merrill's long-term debt to A-1. What convinced Moody's is that Merrill has lowered its cost structure, probably for good. "There really does appear to have been a cultural shift from emphasizing market share to a bottom-line focus," says Moody's Christopher Mahoney. "We have a much higher degree of confidence that they can perform well in bad markets."

Merrill has done much to insulate itself against market reverses. It has successfully shifted away from volatile brokerage commissions toward dependable fee income, mainly by accumulating a huge cache of customer assets, which are growing at a steady 10% a year. That push began in the late 1970s, when the firm pioneered the Cash Management Account, a combination CD, checking, and brokerage account. Merrill brokers used this to attract money that they could then direct into an assortment of Merrill investment products such as mutual funds. Merrill Lynch Asset Management Inc., one of the largest mutual-fund operations, has $120 billion in assets, up from less than $80 billion in 1988.

SCHREYER AND TULLY: SLIMMING MERRILL DOWN AND TONING IT UP



rrill is currently benefiting from nterest rates, which are causing customers to move their money short-term money-market funds higher-yielding long-term bond . The firm earns both a onetime charge when the money is moved profits from the slightly higher gement fee on the bond funds. A hift of the roughly $130 billion that ll customers have in short-term would buoy Merrill's earnings by $120 million, estimates analyst Ali- Deans of Smith Barney Harris m & Co.

a time when creditworthiness is next to godliness, Merrill has amassed a formidable $11 billion capital base, the largest of any broker. It has been steadily reducing such high-risk assets as bridge loans, and it has among the highest ratios of equity to net assets of any brokerage.

Schreyer's efforts to boost Merrill's competitiveness have been helped by the travails of its rivals. The firm, once accident-prone, is now almost as notable for what it didn't do wrong as what it did right. Caught with a portfolio of ailing bridge loans, First Boston Corp. had to be bailed out by parent Credit Suisse. Merrill had far fewer such losses. After Drexel Burnham Lambert Inc. went under, Merrill became the No. 1 issuer of junk bonds, though the market has shrunk. Shearson Lehman Brothers Inc. appeared to upstage Merrill when it bought E. F. Hutton in 1988 and doubled its broker ranks. "We were viewed as stodgy, and Shearson was viewed as bold," says John L. Steffens, Merrill executive vice-president. Hutton, though, was a costly black eye for Shearson. Merrill picked up a lot of business when Salomon Brothers Inc. became enmeshed in a Treasury bond bid-rigging scandal. "It helped us when a few of the 'bulge-bracket' firms stumbled," says Jerome P. Kenney, Merrill executive vice-president.

CLEAN-NOSED. Merrill has also managed to maintain a clean image at a time when many firms have been sullied by charges of wrongdoing. The Securities & Exchange Commission is currently investigating whether Merrill illegally parked bonds for a Florida insurer in the mid-1980s, which Merrill denies. And along with all primary dealers, Merrill is under scrutiny for possible collusion in Treasury issue auctions. But the firm not only avoided being implicated by the Levine-Boesky-Milken scandals but got favorable publicity for helping the SEC. Credit goes to Merrill's strict compliance department, its extreme image-consciousness, and top management's basic philosophy. Long before Warren E. Buffett was telling Salomon employees to watch their ethics, Schreyer's mantra has been, "no one's personal bottom line can ever be more important than the reputation of the firm itself."

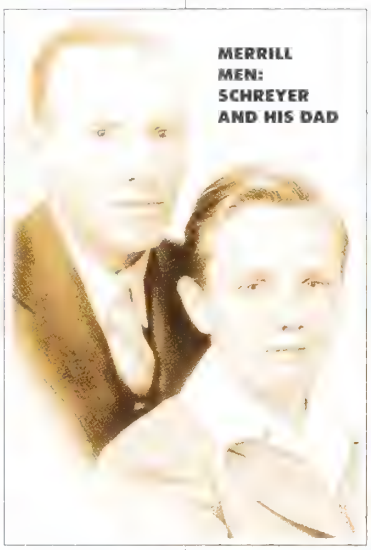
Despite recent achievements, many Wall Street executives think the firm's financial results are simply a windfall from the robust stock and bond markets. They refuse to believe that Merrill's management has changed much. A good deal of the skepticism is directed at Schreyer. In fact, over the past few years Schreyer has become much more effective (page 220). But the constant lack of respect gives Merrill executives fits. "I've never met a group of people so determined to prove their critics wrong," says Scott Offen, an analyst at Fidelity Investments, a major Merrill stockholder. "They keep shouting and no one's listening. They have disappointed people for so long."

There's no denying that. For years, Merrill's strengths have been obscured by its predilection for overspending and undermanaging. During the 1980s, it pulled out all the stops. To overcome its inferiority complex in investment banking and break into the big leagues, it paid top dollar for talent. Schreyer recruited a raft of big names (all of whom

'HE IS THE SPIRIT OF MERRILL LYNCH, FROM WALL STREET TO MAIN STREET'

When Donald T. Regan was CEO of Merrill Lynch & Co. from 1970 to 1980, the outspoken ex-Marine generated continual publicity. In contrast, William A. Schreyer has never been the subject of a major media profile during his six years as Merrill's chief executive, says a firm spokesman. Critics say that under his easygoing tutelage, Merrill lumbered along on mere inertia, with little regard for profitability. "He doesn't exude great management talent," says a longtime Merrill gadfly, First of Michigan analyst Perrin Long.

But Schreyer too often gets short shrift. Though he shares blame for some of Merrill's earlier problems, in recent years, he has honed an effective management style by promoting teamwork and delegating authority to a cadre of strong managers. "Bill Schreyer is the consensus type," says Regan, once one of Schreyer's harshest critics. "You don't need . . . a strong, dynamic leader." Adds Penn State football coach Joe Paterno, a close friend of Schreyer's: "Bill is a very dynamic guy, but in a different way. He's not filled up with himself."



MERRILL MEN: SCHREYER AND HIS DAD

CHEERLEADER. More than anything, Schreyer is an effective cheerleader for team Merrill. He started out as a retail broker in Merrill's Williamsport (Pa.) branch, where his father was branch manager. After stints in Merrill's research and trading departments, he climbed the corporate ladder at New York headquarters. But his years out in the field make him popular with the firm's retail brokers. He motivates them with his optimism, sense of humor, and innate salesmanship.

A lot of the credit for Merrill's recent success goes to Schreyer's handpicked top management team. He shares the helm with president Daniel Tully. Also a former broker, Tully plays as Mr. Inside to Schreyer's Mr. Outside. "Schreyer has very, very capable people running the major divisions," says Perrin Long. "He sits up there and pushes the buttons, and the company just keeps rolling along."

Retail head John L. Steffens is credited with setting Merrill's successful asset-gathering strategy a decade ago. Stephen L. Hammerman, a former prosecutor, established one of the toughest compliance departments on Wall Street. Arthur Zeikel built Merrill's huge mutual fund operation. "Dan's attitude is: If you want me to make every decision, what do I need you for?" says Zeikel.

Many major decisions are made by consensus. Schreyer and Tully wanted to take a look at buying ailing E. F. Hutton in 1988. But Merrill's executive committee voted the idea down. This saved Merrill the problems Hutton brought to Shearson Lehman Brothers Inc. Other times, Schreyer has had to persuade his lieutenants to take radical action, such as the $470 million restructuring charge in 1989 and a broad management reorganization last year. "I didn't agree with the realignment. [But] it was an ingenious move," says Hammerman.

When Schreyer steps down in 1993, as he has said he will, Tully is expected to take his job. "The board backs Tully," confirms a board member. The big question is who will replace Tully as president. Consumer chief Steffans, 50, is considered the top contender. He got some rivals when four division heads were promoted in a 1990 reshuffling.

Although there are some strong candidates, it's not clear whether any will personify, as Schreyer does, Merrill's carefully crafted public image, which relies on patriotism and bullishness. "He is the spirit of Merrill Lynch, from Wall Street to Main Street," says Charles A. Sanders, CEO of Glaxo Inc. and a Merrill director. The man who made Merrill get its act together may not be an easy act to follow.

By Leah Nathans Spiro in New York

are now gone) to broaden its manag ment ranks, including Courtney Jone former treasurer of General Moto Corp., as chief financial officer. Its bi gest embarrassment was signing lon term leases in 1984 on two costly hea quarters buildings in lower Manhatta when one proved to be enough. Most the 2.2 million square feet in extra spa has been sublet, but 170,000 square fe are still empty.

The low regard for cost control ma fested itself in less spectacular way Employees remember sending packag to each other between floors by Unit Parcel Service. Bond traders got $12 day, which has since been pared to $ for a take-out lunch. Merrill's tradi floors, featured in the movie *The Bo fire of the Vanities*, are probably t largest and most expensive on W Street. Traders' desks were piled hig with the latest computers and screen some of which they never used.

REFORMS. Schreyer and Tully shoulder much of the criticism for these excess "They were the ones that got the blam and they should get the credit," for t improvement, says Regan. Both allow lieutenants to build separate fiefdo without holding them accountable for sults. And they were lax in installi operating controls, which resulted in o of Merrill's few visible disasters duri the 1980s: a mind-boggling, one-day tra ing loss of $377 million in April, 1987.

That certainly got Schreyer's atte tion. But it wasn't until the crash lat that year that he pushed the panic bu ton. Merrill found itself stranded wi shrunken revenues to support its en mous cost structure. Schreyer co menced an extensive series of reform "The institution doesn't change. The pe ple change, because they become mo experienced and they learn from th mistakes," says Merrill General Couns Stephen L. Hammerman.

First, Schreyer insisted that Meri beef up its risk-management procedur The firm installed Daniel Napoli, a f mer bond trader, in a new position senior vice-president responsible f monitoring risk firmwide. Instead of l ing under the thumb of a powerful tra ing chief, Napoli reports directly to Tu and sits on the executive committ Merrill has also scaled back trading its own account. Today, about 85% trading revenues come from less ris trading for customer accounts.

Merrill is forcing managers to r their divisions more like freestandi businesses. Managers are accounta for all the costs of their divisions. T firm is also systematically putting un under the microscope. At the end of ery quarter, in what the firm calls

en of proof" process, Merrill re- from two to five of its businesses are not meeting budgets and are ng less than a 15% return on equi- hreyer's overall goal for the firm. ll has exited about 15 businesses ing Fine Homes International, for- Merrill Lynch Realty, most of its y Life insurance business, and its ng business, Broadcort Capital.

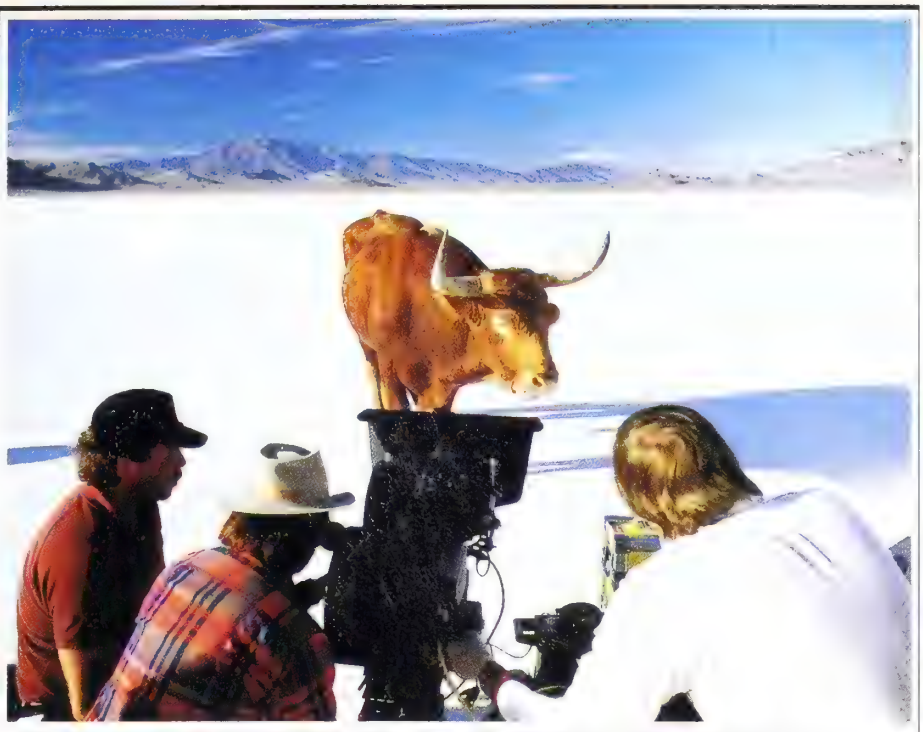
rill has scaled back significantly eas. It cut costs 40% in London 1988 and now makes a market in itish stocks, instead of the 120 of a ago. It sold its Canadian retail bro- e and pulled out of Australia, par-) global sales offices down to 11. stically, Merrill has drastically cut h-network costs. It is reducing 14 wide operations centers to 2. That rim 1,200 employees and 400,000 e feet of space, saving $85 million 92.

RY FREEZE. The firm now forces the of its six operating divisions—rading, equity trading, investment ng, retail brokerage, asset manage- and insurance—to pick up the to- sts of the support staff. The re- of 'dedicating' these costs was ssive: a whole tier of support per- l was eliminated and expenses, no- in human resources and the con- r's office, were reduced tically.

pite the strong stock market this Merrill instituted a salary and count freeze throughout most of rm, and managers have been di- l to shift people slow to more ac- reas. "Ninety per- of my time was downsizing and figuring. It's not a f a lot of fun," David H. Ko- xy, executive vice- lent in charge of . "But I'm just oing to add head . I don't want to into a position e we're the biggest e top of the market. It's too pain-

rill is also giving greater power to managers. The executive manage- committee, a 13-member entity runs the firm, had been dominated aff executives who ran such sup- divisions as legal, operations, and ce. Now it is guided by the heads of rm's six profit centers.

e firm is restructuring the compen- system to get employees to think like owners. Managers' base pay onus are now based in large part e revenue of their divisions less llable costs, such as staff, space,



THE BULL ON LOCATION: SCHREYER'S GOAL IS A 15% RETURN ON EQUITY COMPANYWIDE

and operational support. And more pay is in stock. Senior managers get 20% to 50% of their compensation in restricted stock, with the pace of vesting linked to Merrill's ROE. The more senior the managers, the more stock they get. "Close to 80% of my net worth is invested in Merrill stock," says Herbert M. Allison, Merrill's chief financial officer.

Despite the improvements, Merrill still has major weaknesses. Despite years of effort, the profitability of its large investment-banking operation still is lackluster. Merrill did not begin building its capital-markets capabilities until the late 1970s. The firm became the No. 1 underwriter of all debt and equity in 1988. Yet that hasn't translated into the top slot in profitability because Merrill dominates mostly the low-margin, commodity end of the underwriting business. For example, Merrill is the ranking debt underwriter, where fees are half a percentage point of the underwriting. But in the initial public offering market, where fees run 6% to 7% of the principal amount, Goldman is by far the leader.

> For all the streamlining, Merrill remains a heavily bureaucratic firm

Merrill has had mixed success breaking into the high-margin mergers and acquisitions business. Often, other firms get the call when companies are planning complex restructurings and refinancings. One reason is that Merrill's bankers still don't have the long-term relationships with corporate executives that generate such business. "The juicy deals in terms of profits, where you need the ear of the CEO and CFO, Merrill is not there," says an industry analyst.

Another reason is that for all of the streamlining, Merrill remains much more bureaucratic than most competitors. This is a major drawback in a business where profitability relies so heavily on speed and innovation. It also hampers Merrill in attracting and keeping good people. "Merrill Lynch is a company which only tolerates entrepreneurs," says a former Merrill employee.

DEEP CUT? Longer term, Merrill faces fiercer competition for individuals' assets, as banks and mutual funds go after this lucrative market. On the institutional side, Merrill must contend with more powerful banking rivals, such as J. P. Morgan & Co. And to stave off global financial giants, it must boost its worldwide presence. Merrill has a successful investment banking presence in Europe and Japan and a thriving retail brokerage operation in Japan. But its international presence is deficient, and it may have cut too deeply.

But perhaps most important, it must maintain its hard-won stress on organizational discipline and cost-control. Old habits die hard. Observers note the firm's compensation costs are moving up again, although it is hiring more brokers than support staff. They also note the annual bash for Merrill's top producers will still be held overseas in Barcelona instead of in a more modest domestic locale. Dean Eberling, a Shearson analyst, sums up the challenge: "They have gotten some religion. Whether they're born-again, I don't know."

By Leah Nathans Spiro in New York

INVESTMENT FIRMS

CO-CHAIRMEN RUBIN AND FRIEDMAN: HEADING FOR RECORD PROFITS IN 1991

THE STREET'S BIG HOLDOUT MAY HAVE TO GO PUBLIC

Goldman Sachs's capital needs could force it to issue stock

The money machine called Goldman, Sachs & Co. grinds on relentlessly. At yearend, it should post record earnings and may even be Wall Street's pretax profit leader for 1991, outstripping longtime rival Salomon Brothers Inc., which is mired in the Treasury-auction scandal. Only Merrill Lynch & Co., more than twice Goldman's size, could eclipse it for the No. 1 spot. Goldman plans to boost earnings even more by expanding its foreign-trading and derivative-securities business and pursuing other alluring opportunities.

Still, in the eyes of many Wall Street players, Goldman has a major weakness that could hobble such grand ambitions: The venerable 122-year-old firm is the last major securities house not publicly traded. Unlike its rivals, Goldman can't call on U. S. capital markets for the money to keep growing. It was recently disclosed that Goldman is seeking to raise at least $275 million in private capital from a group of insurance companies. Even so, many observers believe that Goldman, now owned by its 146 general partners, will have no choice but to go public sooner or later.

As long ago as 1969, Goldman began considering the possibility of selling stock publicly. In 1986, then-Chairman John L. Weinberg held a partnership meeting to discuss the matter. The firm's capital needs have been growing steadily (chart). The idea, though, was overwhelmingly rejected. Most Goldman partners argued that public ownership would require detailed financial disclosures. That would subject them to carping from stockholders and analysts and would inhibit long-term planning. Goldman has been selling debt issues in Luxembourg, where disclosure is minimal.

A Goldman spokesman dismisses recent talk about an initial public offering as "unfounded speculation" and insists the firm can meet the capital-raising challenges of the 1990s. There is no evidence that the firm's new co-chairmen, Stephen Friedman and Robert E. Rubin, have an IPO timetable. But the idea is apparently being bruited about. A Goldman partner recently quizzed an executive of a firm that has gone public on the mechanics of the process.

Since 1970, when Donaldson, Lufkin & Jenrette Securities Corp. did Wall Street's first IPO, every other major securities firm has decided either to issue stock or become a subsidiary of a larger financial institution. "Hell, everybody wanted to stay private," says an officer of a firm that made the switch. But "we just couldn't."

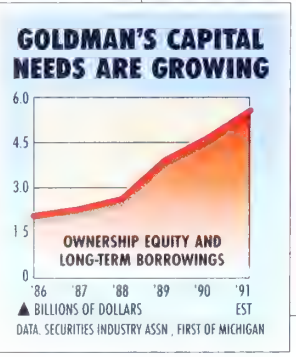
The case for public ownership is strong. Right now, Goldman's assets-to-equity ratio is about 25 to 1, which is in line with Wall Street competitors. Yet because stock offerings are not an option, Goldman must increasingly boost capital by taking on debt—a no-no in these leverage-leery times. Goldman's debt currently carries a lofty A-1 rating. But ratings agencies and potential investments could well be put off by significantly greater leverage.

YOUTH BRIGADE. True, Goldman can attract more equity by enlisting outside partners. Japan's Sumitomo Bank Ltd. is the largest holder, with a 12.5% stake. Nonetheless, this approach has limits. Outside partners' stakes are structured rather like private placements of preferred stock. Trouble is, some rating agencies treat these preferred-like stakes as close to debt, and Goldman may be amassing too much of that to keep raters happy for long. Raters get nervous when preferred exceeds 15% of equity. Counting the Sumitomo stake as preferred, which some raters do, the level will be 32% by yearend. An official of one agency said that would give him "some concern." Even excepting the Sumitomo interest, which Goldman considers similar to common stock, the level would be above the threshold, at 16%.

The youth of Goldman's general partners is another factor for change. Half of them have made partner since 1985. Unfortunately, "they can't get cash out of their equity for years," notes Perry Long, a First of Michigan Corp. analyst. There are reports that some younger partners have been lobbying for an IPO. And every time older Goldman partners retire, the firm must dip into capital to cash them out—albeit on a gradual basis. In a public company, inside shareholders can sell stock with ease.

Goldman's ability to remain private for this long is a tribute to its financial agility. In 1990, which was the securities industry's worst year in recent history, Goldman posted record pretax earnings, largely because of its savvy trading of foreign currencies and metals. But the firm's ambitions to push into exotic trading and other frontiers of finance may require much more capital than it can round up the old-fashioned way.

By Larry Light and Lth Nathans Spiro in New Yrk



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INVESTMENTS

HOW LONG CAN BIOTECH STAY IN THE STRATOSPHERE?

With so many untested companies, the rally could fall to earth

Cynthia Robbins-Roth is a California-based consultant who makes her living by analyzing biotechnology companies. When a prominent biotech venture capitalist recently inquired about a company called Alteon, he had a simple question: What in heaven's name did it do? Although he had just bought 1,000 shares of Alteon stock on the advice of his broker, "he had never heard of them," says Robbins-Roth. But his ignorance was bliss—for he had already doubled his money.

Welcome to the superhot—some say overheated—world of biotechnology stocks. Since the beginning of the year, companies on the cutting edge of biomedical research, in fields as diverse as AIDS and heart disease, have charmed Wall Street because of their growth prospects and resistance to economic malaise. The hottest segment, over-the-counter biotech stocks, has more than doubled in market valuation, according to Bridge Information Systems Inc.

But with stock prices rising to the heavens, the time for caution has arrived. True, short-selling of biotechnology stocks is likely to remain hazardous so long as the buying mania continues. But longtime biotech bull Jeffrey W. Casdin, an Oppenheimer & Co. analyst, says the time is ripe to "take some chips off the table."

OVERWROUGHT. The rally in biotech initially was led by the most solid biotech companies—those that actually have sales and earnings, not just the promise thereof. A handful of established companies such as Amgen, Genzyme, and Chiron were fast joining industry pioneer Genentech in the ranks of the profitable. But in recent months, the momentum has lured investors to more than a dozen second-tier companies, such as Synergen, Gensia Pharmaceuticals, T Cell Sciences, and Cytogen. Many such companies are two to five years from having significant sales and earnings, but their stocks have jumped to dizzying new heights anyway. Meanwhile, more than 30 small biotech companies have gone public this year, and other companies are heading back to the Street via secondary offerings.

Biotech investors are enraptured by the promise of future medical breakthroughs. Take Synergen Inc., based in Boulder, Colo. It is testing a drug called Antril against a range of diseases, including life-threatening infections and inflammatory conditions. Dazzled by the potentially huge markets for the drug, investors bid up Synergen shares from $11.50 to $59.88 this year.

Companies working in AIDS research are even more beloved by Wall Street. The list includes MedImmune, Repligen, and, above all, Immune Response. That company's recent stock performance provides a jarring example of the jitt of an overwrought market. Analy were predicting Immune could scor big payoff by 1994 on a promising A vaccine, and fevered buying had sent stock soaring twentyfold since the of 1990. But on Nov. 12, a ruling Washington regulators dashed the c pany's hopes for quick approval, pu ing some estimates out at least anot two years. The next day, the compar shares plummeted 26%. Synergen st likewise fell 12% in two recent days cause of bad news on one of its dru

EASY MONEY. While such stocks are deniably speculative, the more than young companies that launched ini public offerings this year are even m of a crapshoot. Some are simply young to call: Seattle-based Icos, wh shares have gained 125% since they gan trading in June, went public a sc 22 months after the company was est lished. It has a distinguished roster scientists on the payroll but not a sin drug on the market or in clinical tri Then there is Alteon. Although the year-old company boasts an impress crew of scientist founders, its first pr uct, designed to treat diabetes compl tions, is only in early clinical tests. on Nov. 1, the 31-person comp raised $37.5 million in its IPO, stock doubling in minutes.

Industry experts give much the credit for this ongoing rally the drawing power of Am Inc., the Thousand Oaks (Ca biotech giant. Amgen's two bl buster products to treat ane and immune suppression h helped give it a market valua of more than $8 billion. Th days, says Michael Murphy, v edits the *Overpriced Stock S vice* newsletter, "if you want lose a lot of money in biot short Amgen." But investors get burned in what Murphy p dicts as a "very nasty correcti

Until a correction comes, companies that raise money w the window is open will enjo luxury their predecessors did Traditionally, much of the ea stage funding for biotech com nies involved a measure of d pline: meeting goals and prov progress to sophisticated vent capitalists. Today's biotech in tors have but one goal—ris stock prices, fueled by hope scientific advances. And Imm Response's shareholders can test to this: When those hopes ter, stock prices deflate. Fast.

By Joan O'C. Hamilton in Francisco

SOME OF BIOTECH'S HIGHEST FLIERS

	Share price 12/28/90	Share price 11/13/91	Percent change
AMGEN Anemia, cancer therapy drugs	20¾	58⅞	184%
BIOGEN Research into viral diseases	29	47¾	65
CENTOCOR Monoclonal antibody-based drugs	22¼	50⅜	126
CHIRON Vaccines, diagnostic research	44	72	64
GENSIA Heart and brain disease research	9⅜	39¼	319
IMMUNE RESPONSE AIDS vaccine research	2⅞	46	1500
IMMUNEX Immune-system drugs	35¾	56¾	59
LIPOSOME TECHNOLOGY Novel drug-delivery systems	2¼	11⅝	417
MEDIMMUNE AIDS research	11½*	51¼	346
NEUROGEN Research into anti-anxiety drugs	3¼	17¼	431
SYNERGEN Anti-inflammatory drugs	11½	59⅞	421
VIRATEK Manufactures anti-viral drug	2	13⅜	569

*Share price on May 8, 1991, first day of trading

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SAMSUNG Electronics

Technology that works for life.

BY GENE G. MARCIAL

THIS DAZZLING PERFORMER MAY DO AN ENCORE

Investors are constantly scouting for undiscovered "wonder stocks" that ultimately soar to great heights—something like Ivax, the fast-growing health care company whose stock has zoomed from 6 to 45 in just a year. BUSINESS WEEK reported in June, 1990, that Ivax, then at 11, was favored by some daring pros.

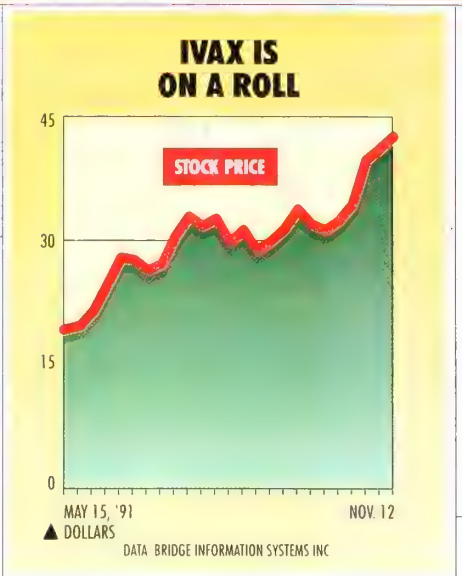
Now that Ivax has rocketed sevenfold in so short a time, is it all over for the stock? Far from it, say some money managers who have been accumulating shares. For openers, it will split 3-for-2 on or about Nov. 15. That will broaden its appeal for small investors and trigger more buying, says one New York money manager.

More important is the commitment of Chairman and CEO Phil Frost to expand Ivax, whose market cap has swelled to $1.7 billion, into a fully integrated global pharmaceutical company focusing mainly on generic drugs. He and his management team came from Key Pharmaceuticals, which they built up and then sold in 1986 to Schering-Plough for more than $800 million.

Veteran health care analyst Ron Nordmann of PaineWebber is high on Frost and his company. He figures that even though Ivax is relatively small, with 1990 worldwide revenues of $142 million, it has in its pipeline new products—including drugs to treat Alzheimer's disease, AIDS, and rheumatoid arthritis—that will boost revenues to nearly $1 billion in 1994.

DOUBLE YOUR PLEASURE. And despite its already amazing growth, Nordmann argues that Ivax could be a $100 stock in three years. He estimates that a company that is likely to increase earnings at almost 100% annually starting this year should easily command a price-earnings ratio of 25. He expects the company to earn $1.25 a share in 1992, vs. 40¢ in 1991, with $2.50 on the horizon for 1993 and about $4 in 1994.

In line with Frost's plans for Ivax, whispers are that its specialty-chemicals division will soon be spun off to shareholders or sold, perhaps to Union Carbide. Ivax and Carbide already jointly own an Ivax unit in Britain. Ivax's chemical division makes a broad line of products for the aerospace, semiconductor, automotive, and textile industries and is said to be worth more than $100 million. Frost will then concentrate on the other two divisions—pharmaceuticals, which includes internally developed and licensed drugs, and the Diamedex unit, which makes diagnostic test kits for clinics and laboratories. Frost declined comment on the future of the chemical unit.



INTELLIGENT MAY OUTSMART THE SHORTS

Computer sales have been lethargic—but not at Intelligent Electronics, a major seller of personal computers, with a network of 1,125 stores in the U. S. and Canada. Even so, its stock is in the pits, down to 21 from 37 earlier in the year as earnings per share have slumped.

But the stock's decline has attracted other investors, who insist that the company's poor earnings picture is mainly due to the 23% rise in the company's shares outstanding. In February, InEl sold 3.3 million new shares at $33 apiece to finance its acquisition of BizMart, a major chain of office-products stores.

Kemp Fuller, a portfolio manager at Baird Patrick, is keen on the stock and thinks that despite the dilution, earnings for the fiscal year ended Oct. 31, 1991, will total $2.15 a share, vs. last year's $2.05. He notes that sales jumped from $1.4 billion in fiscal 1990 to an estimated $1.9 billion this year. Fuller is forecasting that earnings will rise to $2.40 a share in 1992 and $3 in fiscal 1993.

He notes that the company has managed to capture market share and open new stores despite a weak economy. With debt of only $29.9 million and shareholder equity of $263 million, "InEl's goal to boost sales to $3.5 billion by 1993 is doable," he says. Fuller expects the stock to climb to its old high of 37—which would be 12½ times his estimated 1993 earnings of $3 a share.

He notes that the shorts have been zeroing in. Some 3.1 million shares, or about 17% of the company's 18 million shares outstanding, have been sold short as of Oct. 15. The shorts are betting that recession and general weakness in the computer industry will ultimately batter the stock. But if Fuller's earnings forecast is on the mark, the shorts could get caught in a painful squeeze.

KENT'S BUY MAY COME ABOARD FAST

A company selling electronic connectors and cable is hardly expected to be a live wire. But on the Street, dullness often turns into excitement on an earnings surprise. That prospect has started some recent buying in the shares of Kent Electronics. The stock has edged up from 14 in the summer to 17¾. And some pros are betting that the stock could well jump to the mid-20s if their call on Kent's earnings proves accurate. Here's the scoop:

Kent Chairman and CEO Morris Abramson has been busy acquiring other smaller electronics suppliers. One that Abramson has recently agreed to acquire is Shelley-Ragon, a distributor of electronic connectors in 15 states with revenues of nearly $50 million.

That's no secret. But Abramson is keeping silent on when he will complete the purchase and just how much the acquisition will add to the bottom line. Most analysts think that the buy won't be completed until mid-1992 and that it will add only 5¢ a share to earnings in the next fiscal year, ending Mar. 31, 1993. So they estimate that Kent will earn $1.05 in the year ending Mar. 31, 1992, and $1.20 in fiscal 199

Wrong, say some other pros. They think that Abramson will finish the deal this year and that fiscal 1993 earnings will jump to $1.40 a share, as Shelley-Ragon adds some 40¢ a share to the bottom line. In fiscal 1994, net is expected to rise to $1.60. But with $ million cash on hand and no debt, Kent is out to acquire, and 1994 could see even bigger earnings. So this contingent thinks Kent is worth at least 2

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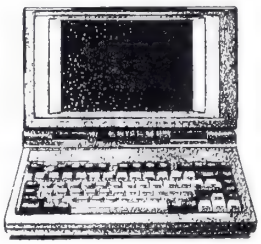

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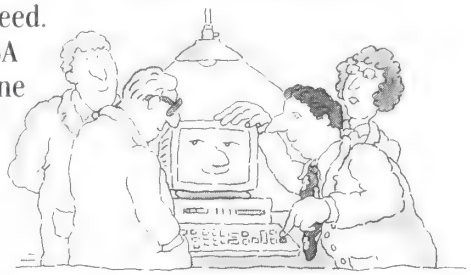

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SPACE

WHAT'S HOLDING UP EUROPE'S COUNTDOWN

Fiscal woes and national interests hamper the EC's space program

THE HERMES SHUTTLE: GAINING WEIGHT—AND ADDED COSTS

Imagine what it does to national pride to spend decades watching the U. S. and the Soviet Union fire manned rockets into space while your own government sits on the sidelines. Tired of being also-rans, the 13 nations of the European Space Agency (ESA) decided in 1987 to spend $14 billion to build a manned space shuttle, dubbed Hermes, as well as a powerful new Ariane 5 rocket, and a trio of orbiting laboratories. Europe's goal was to send its astronauts into space by the turn of the century.

Suddenly, those grand plans are up in the air. Costs have skyrocketed to nearly $18 billion. At the same time, Germany, a key ESA backer, is being walloped by the huge bill for reunification. The European space program always has been a carefully balanced mix of projects—with the French, Germans, Italians, and British each taking the lead on different ones. With budget pressures causing old national rivalries to flare, Europe's space barons have been wrangling for months. At the summit between France and Germany, which foot most of the bill, President François Mitterrand was expected to press Chancellor Helmut Kohl to keep the costly manned space effort going. And ESA Director General Jean-Marie Luton has been trying to hammer out a compromise that can win approval of all the countries when the space ministers meet on Nov. 20 in Munich to consider final development funding for the controversial Hermes shuttle and Columbus space platforms. It may be Europe's last chance for a manned orbital program of its own. Says Luton: "It's go or no go."

EUROPE'S MANNED SPACE PROGRAM

	1990 COST BILLIONS	OVER BUDGET	LAUNCH DATE ORIGINAL/REVISED
HERMES	$7.7	40%	1998/2002
* 3-passenger shuttle			
ARIANE 5	$4.6	5%	1995/1995
* Heavy-lift rocket			
COLUMBUS	$5.3	14%	
* Free Flyer space lab			1998/2003
* Polar observation satellite			1997/1998
* Pressurized lab to be attached to planned U.S. space station			1996/1998

Europe's debate typifies the so searching every space power suddenly engaged in. The collapse of the cold w has undermined much of the West's litical argument that it had to best Soviet Union by racing ahead. " around the world, advocates of aggr sive space programs are having to b off in their aspirations," says John Logsdon, director of the Space Pol Institute at George Washington Univ sity. "We see the pendulum swing back to more realistic assessments."

Even before the Soviet Unio coup attempt, the budget its Mir space station been slashed by 20%. N the breakup into separ republics has put furt support for the station the expensive Buran shuttle limbo. Meanwhile, Congress scaled back plans for the U. S. sp station, after cost estimates soared $38 billion. After early experime proved disappointing, dreams of v commercial payoffs from research space have faded.

HORSE-TRADING. For Europe, the m impetus is the desire to be treated as equal. Though its Ariane program 50% of the world market for launch commercial satellites, Europe's other forts have been largely subject to wh of the U. S. When the U. S. canceled half of a joint mission to survey the in the late 1970s, Europe was force go it alone. And repeated changes in funding and design of the U. S. sp station have frustrated Europe's pl for a lab module. Manned flight capa ty could mean new leverage over fut joint projects. "Once the Europeans h Hermes, it changes the entire equatio says Lynn Cline, NASA's deputy dire for international relations.

The European ministers will thus l ly try to keep the major space proje intact—but not without horse-trad France prefers an autonomous Eur an space program and leads deve ment of the Hermes and heavy-lift Ariane 5 rocket nee to launch it. Italy and Germ favor more collaboration with U. S. So, they're developing a for the U. S. Freedom space tion and a second, free-flying crogravity research lab origin designed to be able to dock the station. Britain, disdainfu the entire manned space r heads the work on a polar orbi satellite for monitoring Earth.

The job of striking a bala falls to Luton, 49, the former h of France's space agency,

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was boosted into office by his gove-
ment to shore up support for Herm
Luton's compromise would delay H-
mes' launch by four years, until 20
and delay and redesign the Free Fly
lab—dropping the costly navigation ge
needed to dock with the Freedom. To
costs would rise, but the comprom
would cut annual payments by an av
age 11% until 2000—and by 16%
cash-strapped Germany. "Either mi
ters buy this package or we're in a
tastrophe," says Lansranco Emilia
program manager for Columbus.

There are plenty of hurdles to cle
however. Many researchers fear ES
rising costs will harm unmanned scie
projects, such as Germany's plann
joint missions with NASA to study com
and the stratosphere. Moreover, Germ
Research Minister Heinz Riesenhuber says the end of the cold war requires a new direction: "We should come to some global cooperation in space strategy." And he is put off by 40% cost overruns for Hermes and design changes that added two tons of weight. "We failed to reach both performance and cost goals," says Riesenhuber, who wants to take th
years more to verify the Hermes des
before funding development.

ESA'S LUTON: C
STRIKE A BALA

SCALING BACK. But Europe's aerosp
contractors argue that further de
would kill the project. Aerospatiale, D
sault, and others say they would have
disband existing engineering teams
ESA's manned program if they can't
a funding commitment this year. "
can't be strung along any more," s
Ernesto Vallerani, chairman of Ale
Spazio, Italy's leading aerospace fi
which counts on Hermes and Colum
for 25% of its work load. As it is, It
will give up some work on the sp
station module to cushion German c
tractors from a steep falloff in reven
when the Free Flyer is delayed.

Despite the hurdles, Europe's over
ing will to have an independent man
presence in space is likely to win out.
politician can afford to inflict furt
damage on local aerospace companies
ready reeling from declining defe
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Soviet and U. S. space programs, a bi
budget-stretching and design-trimm
in Europe may not seem all that ba

*By Jonathan B. Levine in Paris, i
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ZEROING IN ON A LOST CHILD'S LOCALE

It is every parent's nightmare: Browsing in a shopping mall, you become distracted for a few critical moments and look up to discover that your child is missing. Usually, the youngster is nearby. But sometimes, it can take several hours to locate the child, and during this period you fear the worst.

To help lost children summon help, engineer Stephen M. Betheil, president of Nimrod International Sales Inc. in Clarksburg, N. J., has designed a special automatic dialer called Phone Home. Smaller than a deck of cards, it has just one button and stores a single phone number. Hold the device to the mouthpiece of any phone, press the button, and it automatically calls home—collect. Whoever answers can ask the operator for the calling number. So, even if the child is too young to explain where he or she is, the police can track down the phone's location. Phone Home is being marketed by T&M Security Service Inc. in New York and will be available in discount and variety stores for about $20.

THE SOYBEAN JOINS THE BATTLE FOR PURE WATER

The prospect of ever-stricter clean-water standards has industry looking for less expensive ways to remove toxic chemicals. Now, scientists at the Agricultural Research Service's Southern Regional Research Center in New Orleans think that the by-products from cereal and oilseed crops could remove toxics from wastewater at bargain-basement prices.

Results from the first six months of a three-year research effort have found that soybean hulls plucked more than 90% of the zinc found in a test sample. That's comparable efficiency to the oil-based resins and activated charcoal now used to treat toxic effluent. And at just 4¢ a pound, soy is dirt cheap compared with commercial ion exchange resins ($2 to $10 a pound) and activated charcoal (at least 50¢ a pound).

Now, researchers must figure out how to prevent the hulls from breaking down during the filtration process and how to remove the toxic metals from the soy-based resin for reuse. And although distilled soy hulls are expected to work on other toxic metals besides zinc, soy's ability to absorb toxic organic compounds, such as methanol, remains to be tested.

CAN BLIND RODENTS LEAD THE WAY TO THE LIGHT?

Scientists have been trying for years without success to restore sight to the blind. Now, researchers have the first glimmerings that blindness can be reversed.

The experiments began when Manuel del Cerro and coworkers at the University of Rochester used bright light to damage the retinas of lab rats. Del Cerro proved that the rats were blind by using a "startle" test: If animals see a flash of light before hearing a loud noise, they jump less vigorou than if they hear the noise alone. Next, del Cerro implan rat fetal retinal cells into the rats' damaged retinas.

Previous research had shown that the transplanted tiss survives and makes connections to the nervous system. I the question was whether these connections actually fu tioned. So del Cerro subjected the rats again to the startle te By jumping less when they heard the noise, the rats shov that they could at least perceive light. Del Cerro cautions t trials with people are many years away, but he hopes that technique eventually may be able to tackle some forms human blindness.

THIS MIGHTY MICROSCOPE IS KIND TO LIVING THINGS

Today's most sophisticated microscopes offer amazin clear views of individual atoms. And more surprises are the offing from a new breed of X-ray microscope. These to will never quite match the resolution of the best elect microscopes, yet they offer a crucial advantage: the ability examine living tissue. Specimens under an electron microsc must be held in a vacuum while destructive streams of e trons pour through the sample. These conditions destroy liv tissue and even knock out semiconductor chips.

That's why Intel Corp. is so eager to get its hands on "soft" X-ray microscope being developed by C. G. Wang, pr dent of both startup Nanodynamics Inc. and Profile Diagno Sciences Inc. in New York City. It will enable chipmakers inspect chips after every processing step—without sacrific any to an electron microscope. Wang expects to deliver first microscope early next year for about $100,000, or less than the cheapest electron microscope. The profits f those sales will be plowed into finishing a similar tool bioscience, which Wang expects will take three more ye and cost at least $3 million.

HOW TO FILL 'ER UP WITH CALIFORNIA SUNSHINE

With electrically powered cars destined to appear on Southern California highways soon, manufacturers and utilities must find convenient ways to charge the cars, which will have limited mileage. So Southern California Edison and the South Coast Air Quality Management District have designed a pollution-free recharging method: a solar-powered carport.

Photovoltaic solar panels on the roof of the 3,000-square- prototype carport will provide enough energy to charge cars. On cloudy or rainy days, electricity would be pulled the regular grid, says Nick W. Patapoff, senior research e neer at SoCal Edison. The prototype, to be completed in e 1992, will cost around $250,000, but prices should drop lower-cost solar cells under development at SoCal and T Instruments Inc. are ready. If the prototype succeeds, S plans to build carports throughout the area in public par facilities. Consumers would pay for charges by credit car

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52. Macmillan/McGraw-Hill School Publishing Company
53. Martin Marietta Corp.
54. Mead Data
55. NEC America
56. Pioneer Communications of America, Inc. Laser Disc Product
57. Wolfram Research
58. World Resources Institute/The Environmental Almanac

THE WORKPLACE

HAPPY EXPERIMENT: AT STRIDE RITE, DAY CARE FOR CHILDREN—AND GRANDPARENTS, TOO

CORPORATE AMERICA IS STILL NO PLACE FOR KIDS

A new survey finds that few companies accommodate family life

Many of Johnson & Johnson's products, from Band-Aids to baby oil, are aimed at families, especially those with children. So it seems logical that the New Brunswick (N. J.) company wants to build a good reputation among customers and employees alike as a family-oriented company. During the 1980s, for instance, J&J became one of the first to offer a wide range of family programs such as discounts for local day care centers.

Then, in early 1989, a task force of senior executives decided that such moves weren't enough. James E. Burke, J&J's chief executive at the time, launched a package of 12 new family initiatives, calling it "the most important commitment we've ever made" to employees. Burke even changed the company's written credo, which had been altered only three times since 1943. The addition reads: "We must be mindful of ways to help our employees fulfill their family responsibilities."

Coping with conflicts between work and family is one of the biggest employment challenges of the day. Over the past two decades, the number of working women has shot up to nearly half the work force. Single working mothers have become plentiful, and two-career families may soon be the norm. Corporate layoffs and relocations, long commutes to find affordable housing, and the health care morass add to family pressures.

In the first systematic attempt to assess how well companies help employees deal with all this, New York-based Families & Work Institute, a research group formed by Ellen Galinsky, an expert on work and family issues, and Dana Friedman, a former Conference Board expert on the subject, has created what it calls a family-friendly index. Designed ov three years with the help of corpora officials, academics, and other exper the index assigns points for such p grams as flexible work arrangemer and on-site day care. Higher scores a given to formal, companywide p grams. In its first survey, completed l year and set to be published on Nov. the institute queried 298 of the larg U. S. companies, then ranked the that responded.

'JUST STARTING.' The results show t Corporate America still falls far short what the institute calls the ideal. T survey did find that many large com nies are helping employees cope w children or elderly parents, and it turn up a profusion of experiments. But average score was a mere 68 out o possible 610 points. And according to institute's complex set of measures, o four companies—J&J, IBM, Aetna, a Corning—came close to being truly fa ily-friendly. "To be successful, fam programs must be seen as intrinsic t company's business mission," says linsky. "And that's just starting to h pen, even at the top four companie Agrees Sherry B. Herchenroether, v monitors family-services programs Aetna Life & Casualty Co.: "Most c panies, including Aetna, have a long v to go."

The institute's study is unusual cause it differentiates between two ov lapping issues: work/family confli and how women are treated. For stance, the survey didn't look at pay promotion for women. Instead, the in measures the prevalence and effect ness of benefits, such as parental le which increasingly are used by both and women.

Institute officials concede that t scoring method isn't perfect, because field is uncharted and rapidly chang Galinsky also says that even the l company may never score 610, beca every policy may not be appropriate every company. For instance, most ployees at the New York offices of M ropolitan Life Insurance which ranked 17th, comm from the suburbs. So child subsidies would be more ap priate than on-site day care.

In their analysis of corpo cultures, the researchers fo that a company's commitmer family policies typically de ops in three stages. First, a managers advocate such grams. The company mi adopt one or two initiatives, the CEO usually isn't invol The institute found that 46

THE TOP SCORERS

Here are the most family-friendly of 188 companies surveyed. Because all policies may not fit every company, the ideal score is probably below the maximum of 610 points. For an explanation of the index, see page 236*

JOHNSON & JOHNSON	245	JOHN HANCOCK	175
IBM	223	WARNER-LAMBERT	175
AETNA	195	U.S. WEST	165
CORNING	190	DU PONT	163
AT&T	178	TRAVELERS	158

*Based on policies in place as of spring, 1990

DATA FAMILIES & WORK INSTITUTE

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the 188 companies are in this category. Some 33% more haven't even made it this far, including three bottom-ranked companies: Mack Trucks, Union Pacific, and Continental Airlines.

In the second stage, top officers get involved. The corporate emphasis shifts from worrying whether family policies hurt productivity to looking at their role in recruiting and retaining workers of both sexes. Some 19% of companies are doing this. In the third stage, the corporate culture begins to change, which the institute found only at the top four companies. In 1988, for example, IBM began granting unpaid parental leave of up to three years.

J&J is another third-stage company. Just ask Karen B. Appignani, 34, a programming analyst in J&J's headquarters. After her daughter Tara was born two years ago, Appignani's supervisor suggested that she consider flex-time arrangements. She took a six-week maternity leave and then worked at home on a personal computer for three months. Then, Appignani came into the office three days a week for an additional three months, working at home the other two days.

By the time she returned to work full-time, J&J had opened an on-site day care center. Today, Appignani drops Tara off at 8:30 a.m. and picks her up at 5 p.m. She even finds time to burn off stress in an aerobics class that J&J offers on-site. "When I talk to people at other companies," says Appignani, "they tell me: 'You've got it so good.'"

AFTER-SCHOOL GAP. So why does J&J fall short of the ideal the institute drew up? In the past year or so, the company has added new programs, including health care for most part-timers and a $2,000 payment to employees who adopt. But there are still no after-school day care programs, no vouchers for child care at locations that lack on-site centers, and no managerial-performance ratings based on work/family issues.

Even when there's a mandate from the top, as at J&J, changing the corporate culture isn't easy. In most com[panies], such policies as part-time work a[nd] extended leave are applied at the disc[retion] of an employee's immediate bo[ss]. The performance of managers usually judged by how well their unit does. [So] many fear that productivity will fal[l] employees go on leave, though the[re] no definitive evidence either way.

MetLife discovered what a stumbl[ing] block managers can be in a 1989 sur[vey] of 8,400 employees. About 50% said th[eir] bosses weren't up to speed on the co[m]pany's work/family programs. "T[hey] told us we had more work to do," s[ays] Anne E. Hayden, MetLife's vice-pr[esi]dent for human relations. The compa[ny] sent all managers a detailed guideb[ook] with answers to common questions [on] family policies. MetLife has also [held] training sessions for managers and [is] studying ways to do more. Both J&J [and] IBM have set up training courses [on] work/family issues that managers m[ust] attend. However, none of these com[pa]nies has included the handling of wo[rk]/family issues in managerial-performa[nce] ratings, as Corning Inc. has done.

It's easy to see why many supervi[sors] are so recalcitrant. Ronald E. Burk[e], district manager of state governmen[t] fairs in American Telephone & T[ele]graph Co.'s Chicago office, has ha[d to] juggle a host of requests since the co[m]pany instituted new part-time and fl[ex]ible-workday policies last year. One

IS YOUR COMPANY FAMILY-FRIENDLY?

The Families & Work Institute created this index to compare work/family policies at large companies. It rates them according to whether they have these options—and gives higher scores for companywide, formal programs

Policy	Maximum score
FLEXIBLE WORK ARRANGEMENTS Variable starting and quitting times, part-time work	10
LEAVES Length of parental leaves, who's eligible, job guarantees	4
FINANCIAL ASSISTANCE Flexible benefits, long-term-care insurance, child-care discounts	8
CORPORATE GIVING/COMMUNITY SERVICE Funding for community or national work/family initiatives	6
DEPENDENT-CARE SERVICES Child- and elder-care referral, on-site centers, sick-child program	15
MANAGEMENT CHANGE Work/family training for managers, work/family coordinators	9
WORK-FAMILY STRESS MANAGEMENT Wellness programs, relocation services, work/family seminars	8
TOTAL POSSIBLE SCORE:	61

DATA: FAMILIES & WORK INSTITUTE

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son on his staff of 25 works part ti and another plans to do so when returns from maternity leave. A t employee has taken leave to care for elderly parents. And last summer, an er employee worked four weekdays Saturday so he could be on the sa schedule as his wife, a nurse.

Still, AT&T's Burke says the effor worth it. He feels output may rise workers gain broader skills when t fill in for those on leave. And "if didn't do this, we might lose some of better people," he adds. "Although haven't discussed it, I think the yo lady coming back from maternity le would look for another job if couldn't work part time."

BOTTOM LINE. Although the institu survey focuses on large companies found many experiments at other ploymers. The Los Angeles Water & P er Dept. has a pilot program called B Alert that beeps fathers who work in field and may not be easy to reach w their wives are about to deliver.

Problem is, leave is mostly the discretion of a boss wh own performance is rated productivity and profitabili

Stride Rite Corp. in Cambridge, Ma opened a day care center in 1990 grandparents as well as children. get a phenomenal number of inqui from other companies," says Karen bold, Stride Rite's director of work family programs. "We probably send 60 packets of information a month."

Still, the institute says the bottom is that neither large nor small emplo are doing enough. The point is dr home by a comparison with prac that are common in Europe, such as parental leave. The institute's i doesn't even include this as a pote policy, though it does assign it points in an "other" category. With gress battling over proposals for ma tory unpaid leave, asking employer pay for time off the job isn't on horizon. Says Galinsky: "We didn't t that was a realistic goal at this poi

U.S. companies are still feeling way on issues of work and family. with the institute's study, they now a clearer view of the paths they pursue.

By Aaron Bernstein in New York, Joseph Weber in New Brunswick, Driscoll in Hartford, and Alice Cu San Francisco

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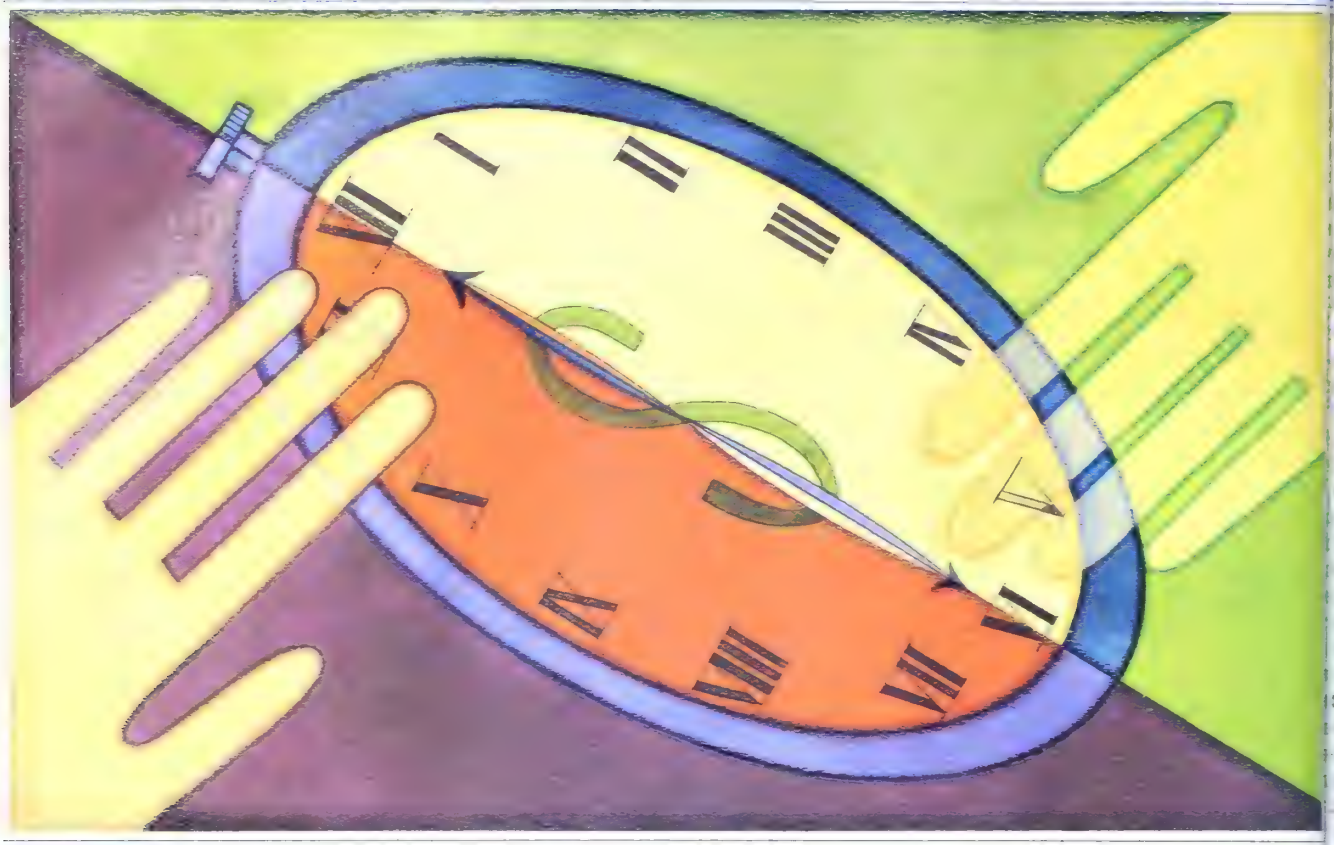


Taxes

NIBBLING AWAY AT THIS YEAR'S TAX BITE

N[illegible] off till next. That's [illegible] but the classic device of tax deferral. And it's "probably the major strategic thing to do" to save on your 1991 tax bill, says Michael B. Kennedy, tax partner at Coopers & Lybrand's Philadelphia office.

[illegible] sta[illegible]ing income, such as a bonus, into 1992 and speeding up deductions, such as charitable gifts, into 1991—is particularly important now. It's one of the few tax-reducing ploys left now that reforms have closed most of the lucrative tax shelters of yesterday. Any income you postpone till next year will be taxed in [illegible] time you settle up in April 1992 you may have earned an extra year's interest.

There's little chance of deferral backfiring, since Congress is unlikely to hit anyone with a rate hike until after the November, 1992, election. An overall rate cut isn't in the wind, either, but Congress might lighten the burden for many taxpayers in 1992 through such devices as a new credit for children.

YEAREND TAX PLANNING

Whatever comes out of the confusion on Capi[illegible] Hill, [illegible] the Internal Revenue Service to adjust tax brackets annually to keep inflation from increasing your tax bill. So while the top rate is scheduled to be 31% again next year, a bit more of your 1992 income will be taxed at the two lower rates, 15% and 28% (table). That favors deferral, too, Kennedy says, because "you'll be able to have $4,350 more taxable income next year" under 31%.

If your 1991 income is heading toward six figures, you'll have "another reason to defer income," points out Michael Hirschfeld, a New York lawyer and contributor to Bender's Federal Tax Service. Starting at $150,000 for a couple filing jointly or $100,000 for singles, the IRS will "start to take away some of your personal exemptions," now $2,150 a head. For each extra $2,500 in adjusted gross income (AGI) above those levels—or even any fraction of such a chunk—you lose 2% of the value of your exemptions.

HOLD THE BONUS. Keeping this year's AGI under $100,000 avoids another "silly little phase-out" that applies for the first time in 1991, notes Lee O'Connor of the G[illegible] Washington. It trims [illegible] itemized deductions by 3% of AGI above $100,000.

Devices for holding down your AGI this year can be as simple as buying a Treasury bill maturing next year [illegible] special certificate of deposit "on which interest is to be made available" until 1992, according to *The Ernst* [illegible]

1991-1992. You can your boss to hold off Christmas bonus until ew Year's.
, "it's virtually impos- do responsible, effec- x-planning without at two years" or dvises Michael Janicki, of the family-wealth of Arthur Andersen York. One reason is sholds in the tax law. aneous itemized de- ," for example, count the amount that they 2% of your AGI. With of $80,000 both this nd next, having ex- of $1,600 each year ring you zilch in de- . But if you bunch ex- to get $1,200 in one nd $2,000 the next, least bag a $400 de- in the second.
PTION. It gets to be a takes game for those l to the alternative n tax (AMT). Higher-in- xpayers must make a set of calculations to he AMT is due. This tax system makes back various deduc- ncluding those for d local taxes. Execu- ten have to pay the a year in which they ercised incentive stock because the differ- etween the exercise d the market value is on Form 1040 but taxable income AMT- he idea is to make body gets by without income tax just be- e or she is making m use of big deduc- tax-favored income.
ur tax bill comes out n the AMT total, that's ou have to pay. And the AMT rate is up r, to 24% from 21%, nore people will find e first-time AMT pay- dicts Janicki. Among ho should be particu- rt, he says, are "two- couples, with each making $80,000 to ." For couples, the ,000 of AMT income is as is the first $30,000 les.
the AMT enters your

A TOOL KIT FOR TAX SAVINGS

Refusing to think about taxes until April could prove costly. Shunting income and deductions from one year to another is a classic strategy for trimming tax bills. It requires a review in time to act before 1991 runs out. At the least, you'll see if you can cut withholding or should increase it to avoid a penalty. You're safe if withholding will equal 90% of your 1991 tax or 100% of 1990's tax

	1991	1992
SALARY AND OTHER INCOME		
MINUS		
ALIMONY, IRA, KEOGH PAYMENTS		
EQUALS		
ADJUSTED GROSS INCOME (AGI)		
MINUS		
ITEMIZED DEDUCTIONS*		
MINUS		
PERSONAL EXEMPTIONS**		
EQUALS		
TAXABLE INCOME		

■ No change in tax rates is scheduled. But brackets are raised each year to cushion you against inflation. So here, with bracket amounts for 1992 estimated by *Bender's Federal Tax Week*, is what a married couple filing jointly can expect to pay each year on each slice of taxable income:

	1991	1992
15% on the first.....	$34,000	$35,800
28% from.....	34,001 to 82,150	35,801 to 86,500
31% on.....	82,151 and up	86,501 and up

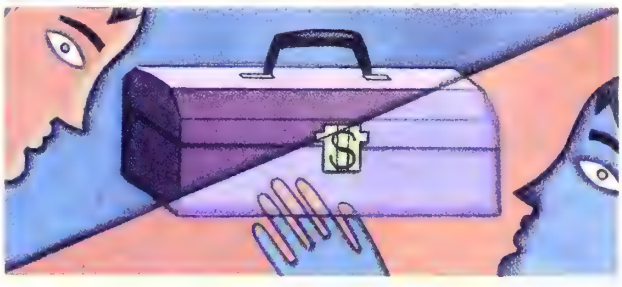
■ And here's the picture for singles:

15% on the first.....	$20,350	$21,450
28% from.....	20,351 to 49,300	21,451 to 51,900
31% on.....	49,301 and up	51,901 and up

* Reduce them, except for medical, casualty, theft, and investment-interest expense, by 3% of AGI above $100,000 in 1991 and $105,250 in 1992

** They're $2,150 each in 1991 but are cut by 2% of each extra $2,500 of AGI starting at $150,000 for couples and $100,000 for singles. For 1992, plan on exemptions at $2,300, with reductions starting at $157,900 for couples, $105,250 for singles

DATA: ERNST & YOUNG, *BENDER'S FEDERAL TAX WEEK*



life, bunching takes much more care. To come out ahead, try to move income into a year when you can't escape the AMT anyway and everything is taxed at 24% instead of your usual 28% or 31%. But you should try to stay out of the AMT at least every other year, Janicki adds, so that you can use maneuvers that work only under the regular tax system—such as prepaying next January's state and local income-tax installments this December.

'PAINLESS WAY.' The regular tax law is hard enough on deductions these days: Even the last shreds of consumer interest deductions disappeared with 1990. So advisers are urging clients not to overlook any possible financial maneuver during the rest of 1991. If your investment-interest expense for buying securities on credit this year will be, say, $13,000 and your investment income only $10,000, you have $3,000 more expense than you can deduct. But there's an "almost painless way" to make it deductible, says Eli Warach, chief consulting editor at Thomson Professional Publishing: Sell off profitable securities for an extra $3,000 of investment income.

This is the time, too, to consider doing things "that you may not be able to do next year," counsels Bob Coplan, a principal at Ernst & Young in Washington. Particularly vulnerable in 1992, Coplan fears, is five-year averaging for lump-sum pension payouts. If you're thinking of a home-equity loan, it would be prudent to take it this year, just in case Congress later restricts the interest deductibility on these loans.

How you handle your vacation house for the rest of the year can matter, too. Renting it out for more than 14 days lets you deduct upkeep costs, but only if you "limit your personal use to 14 days"—or 10% of the rental days, notes *1991 Year-End Tax Strategies* from Commerce Clearing House. Getting close to the limit? You might want to stay in town and work on your tax strategy. *Dick Janssen*

Investing

CASH IN NOW ON THE DOW, PAY UNCLE SAM LATER

With the stock market now hovering around new highs, investors may be tempted to lock in capital gains. Those selling stocks for a profit can always offset gains with capital losses. But if you don't have much in the way of losses this year and prefer to pay taxes later rather than sooner, there are still ways to cash in current gains while postponing the tax on them until 1992.

This year, at least, investors don't have to contend with any significant changes in the tax laws. After offsetting capital gains with capital losses, individuals can still deduct up to $3,000 of net capital loss from ordinary income. Any amount over that level can be carried forward and used in future years.

With so many stocks benefiting from the surge in the market, however, some tax strategies make more sense this year. One popular technique investors can use is "selling short against the box." This allows you to lock in a current gain and defer taxation until 1992. "A lot of investors feel that their capital gains may be somewhat tenuous, that there could be a market correction," says Robert Willens, an accounting analyst with Shearson Lehman Brothers. "It's almost a perfect scenario for selling short against the box."

NEAT HEDGE. It works like this: An investor who already owns 100 shares of XYZ Corp. borrows another 100 shares from a broker and has the broker sell them immediately. In stock market parlance, the investor has made a "short sale." When it's time to return the 100 shares of XYZ to the broker—in 1992, of course—the investor delivers the shares held in his or her personal portfolio (the "box"). The Internal Revenue Service doesn't consider the position closed and taxable until those "long" shares are delivered in 1992. If the shares appreciate after you sold the borrowed shares, you miss out on that extra gain. If the stock goes down, then your hedge has paid off.

If you want to hold on to a stock that already has gained in value but you're worried that it might decline, you can hedge your position by buying a "put" option. That gives you the right to sell 100 shares of the underlying stock at a set price within a period of months. The value of your puts will increase if the stock goes down.

The option price on the put, called the "strike" price, would be slightly below the current share price. And you'd buy an option with an expiration date in Jan 1992. For example, say bought 500 shares of Joh & Johnson earlier this ye $70 a share. The was trading on N at 96⅜. You buy five Januar put options, esse ly giving you right to sell shares of J&J at share. That w cost you $262.50 per o for a total of $1,312.50 commission. At Shea that commission woul $86, says Willens.

If the stock declined i ue, say to 90, you coul your puts to make up th of value in the shares own. If J&J shares rise, s 110, your puts will e worthless, but your s will have increased in by $6,812.50, more than setting the cost of the h

GO FOR GROWTH. Most a ers say now's the tim weed out underperfor PaineWebber suggests ing into stocks with gr growth potential in the moving 1990s. Among pics: Switch from Ame Home Products, with an mated growth rate of into Bristol-Myers Sq which is growing at an mated 19%. Since Paine ber projects similar p earnings ratios in 1992 f companies, "you're buyi perior growth without p a much higher multiple," PaineWebber investmen lyst Mary Farrell.

That would establish a or loss that might fit in your tax needs. And y preserved your stake in dustry. You'll run into if you try to take a loss stock you've owned fo than 30 days or if you bu stock back before 30 have passed from the da sold it. The IRS would dis such a loss under the " sale" rule. Losses will a denied for call options, rants, or convertible that "substantially rese the stock. It's the IRS' w reminding investors can't have their cake a it, too. *Suzanne W*

YEAREND TAX PLANNING

YEAREND SWAPS TO ENHANCE YOUR PORTFOLIO

If you want to maintain your basic market position but take a capital loss, you can sell a fallen stock and switch to another holding in the same industry group. Or you may want to recognize a gain and switch into a faster-growing stock

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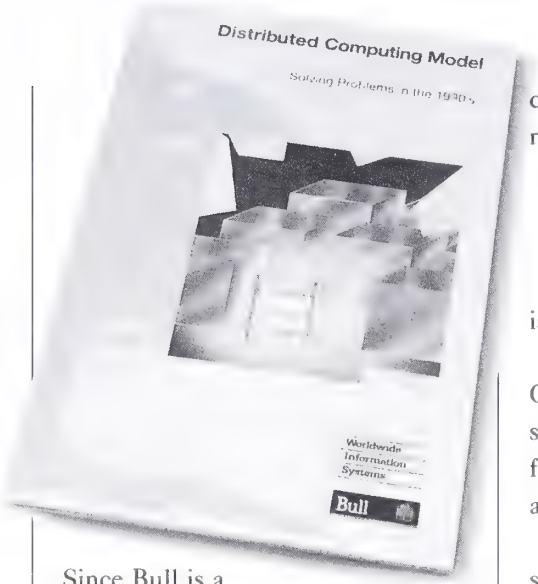

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Contributions

BETTER TO GIVE THAN RECEIVE —BUT WHY NOT BOTH?

Charitable giving is one of the most satisfying ways to trim your tax bill: You get to help a worthy cause, and the worthy cause helps you back. But if you're planning to do something more complicated than writing a check, you'd better start talking to a professional tax adviser pronto.

It's especially important if you're thinking of donating paintings or some other "tangible personal property," such as sculpture, manuscripts, or antique furniture. Unless Congress grants an extension, as museums are urging, you have only till the end of 1991 to take advantage of a one-year "window" that spares you paying the alternative minimum tax (AMT) on the difference between a work's original cost and the current, higher value you deduct from your regular tax (page 240). You need an independent appraisal of any items valued at more than $5,000.

GIFT CERTIFICATES. To qualify, you must give to a charity—typically a museum—that can use the item as part of its regular work. Donating art to a soup kitchen won't work. But if yours isn't a megabucks donation, you don't have to rush. To avoid paying the AMT, just be sure to make the contribution in a year when your total deductions are not going to exceed the $40,000 exemption.

Giving away stock that has appreciated is a more common yearend maneuver. If you have held it for more than one year, you get a regular tax deduction for the full market value (although securities aren't eligible for the one-year AMT escape hatch). Handing over stock is much better than selling it at a profit and donating the proceeds, because you avoid the capital-gains tax that a sale would entail.

Giving shares requires foresight. The gift doesn't count "until the day the securities are actually transferred on the books of the issuing corporation"—and how long that takes is "unpredictable," says a brochure on planned giving from Washington University in St. Louis.

But what if you want to give away a loser? Don't do it, says Bob Coplan of Ernst & Young. "It's better to sell, take your loss for tax purposes, and then give the proceeds" for a full charitable deduction, too, he says.

Donating cash to a charity gets tricky around yearend, too. A check mailed on Dec. 31 counts for 1991, but not one that you hand over in person a day later, according to Washington University. By contrast, an Ernst & Young publication says, a donation charged to your credit card this year "will be deductible in 1991 even though you don't pay the charge until 1992."

The charitably inclined can come out ahead on taxes, too, by planning for more than one year at a time, suggests Arthur Andersen's Michael Janicki. "Many people give the same amount of cash e year," he says. But the de tion means more in a when they're paying reg tax at 31% than at 28%.

You can arrange with m charities to get more f your gift than a tax deduc and a sense of doing the r thing. Many institutio ranging from universities environmental groups, put your gift in what's kn as a charitable remain trust, which pays you inc for the rest of your life.

LIFE BENEFIT. The cha keeps the money when die, but you don't have wait that long to claim a duction. A federal form based on your life expecta and the plan's expe payout, limits the upfront duction to part of the am you contribute. Still, "soc away $100,000 or so mak worthwhile," Coplan s and some institutions work with lesser sums.

For instance, a 60-yea who puts a $50,000 corpo bond paying 10% interest a charitable remainder t gets $5,000 a year plus a time tax deduction of $11 says Ernst & Young. If a bracket donor funds the t with a municipal bond pa 7% tax-free interest inst spendable income will about the same, while the front deduction will ne double. That's because ta empt muni-bond inte doesn't count against yo the federal formula.

Such wrinkles—and a ety of fund types—are re enough for careful cons tion with a tax adviser. you're entrusting a big c of your future income charity, you'll want to fe comfortable with the ta tails as with the institut philosophy.

Worth Noting

■ **KEOGH CAUTION.** A Keogh retirement plan can shelter up to $30,000 of self-employment income a year. And you can wait till Apr. 15 to feed it—or later, if you request a filing extension. But to get a 1991 deduction, you must open the account no later than Dec. 31.

■ **GIFT REMINDER.** You can give $10,000 to another person each year free of gift- or estate-tax consequences. Or, "with your spouse's consent," says J. K. Lasser's *Your Income Tax 1992*, the maximum for a joint gift is $20,000 per recipient.

■ **WINTER WEDDINGS.** A couple with a big disparity in incomes can save on taxes by getting married in December and filing a joint return for 1991, advises Ernst & Young. But two people who make about the same amount of money would better to wait till Januar

■ **SHELTER SELLOFF.** "Pas losses" from tax-shelter vestments don't offset nary income anymore—cept when you sell the e investment. If you do so year, the accumulated lo become 1991 deductions.

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r the third consecutive year, the s of Condé Nast Traveler magazine nosen Alaska Airlines as the number rline in the U.S.

pparently the people who fly us ur competition can see some sort sistent difference.

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Alaska Airlines

244A-CA

I'M GOING TO GENOA

Christopher the Cat is the official mascot of the International Specialized Exhibition "Christopher Columbus: Ships and the Sea". With the curiosity of cats, he stands to represent the amazing variety of attractions and points of interest that will be gathered in Genoa's Old Harbour area from May 15 to August 15, next year: the adventure of sailing, the fascination of scientific sea exploration, the intelligence of ocean technology, the big topical issues of the marine environment. It will be one spectacular vision featuring the sea-related projects and achievements of several participating countries. But there are more reasons to go to Genoa. The Exhibition will coincide with the rejuvenation of the historical city center, based on a vast project by Genoa-born Renzo Piano, one of the world's leading architects. Investing in the city's future, the restoration will give new life to the Old Harbour docks and warehouses, to which major new permanent facilities will be added. In particular, a number of important international meetings -some of them sponsored by the United Nations- will be held in the new Congress Centre, a prime venue offering countries from all over the world an outstanding opportunity to come together. Ente Colombo '92 Via Sottoripa, 5 Tel. (010) 28.41.11 - Fax (010) 29.26.93 - 16123 Genoa - Italy

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YOUNG & RUBICAM ITALIA

500

Colombo '92

ESPOSIZIONE DI GENOVA

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THE FUTURE OF THE SEA PASSES THROUGH GENOA.

I'M GOING TO GENOA

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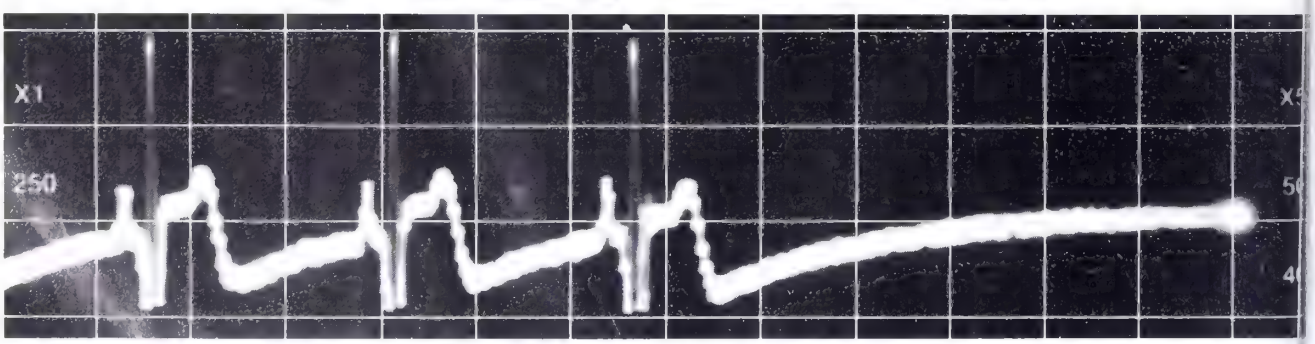
THE FUTURE OF THE SEA PASSES THROUGH GENOA

UNFORTUNATELY, THE WAY TO A MAN'S HEART REALLY IS THROUGH HIS STOMACH.



While your cooking was supposed to help you win someone's heart, it may also help you destroy it.

Because a diet that's too high in fat may increase the risk of heart disease as well as certain kinds of cancer.

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Don't let yourself be counted among the thousands of people every year who literally eat their hearts out.

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The Nature Conservancy

Conservation Through Private Action

Original concept courtesy of Lewis & Partners, San Francisco

244F-CA

ex to Companies

x gives the starting page for a story or fea-
a significant reference to a company. Most
ies are indexed under their own names.
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10	General Electric
11	Gulf Oil
12	Atlantic Richfield
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15	U S. Steel
16	Phillips Petroleum
17	Sun

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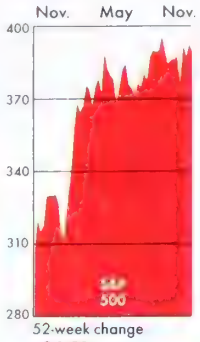
vestment Figures of the Week

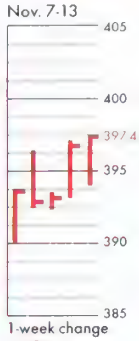
NTARY

market rallied for three row, propelled by a onds. The bond rally was eled by strong demand ar bonds at the auction 7. The Standard & Poor's x index and NASDAQ te Index both reached all- s on Nov. 13. But bond rew hesitant on that day, s declined on word of a an-expected October gain oducer price index. markets were mixed, o declining.

STOCKS

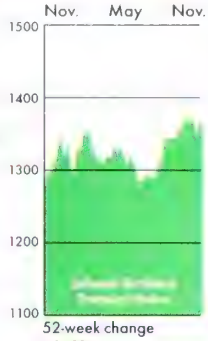


52-week change
+24.0%

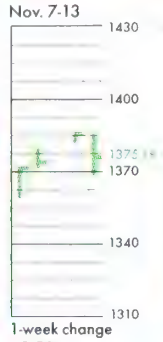


1-week change
+1.9%

BONDS

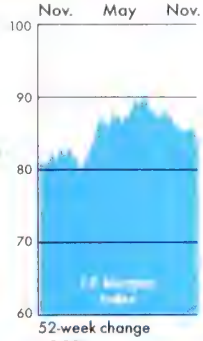


52-week change
+6.4%

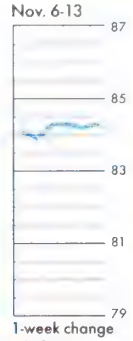


1-week change
+1.2%

THE DOLLAR



52-week change
+4.1%



1-week change
+0.2%

RKET ANALYSIS

OCKS	Latest	% change Week	% change 52-week
IES INDUSTRIALS	3065.3	0.9	19.8
PANIES (Russell 1000)	209.8	2.0	26.6
OMPANIES (Russell 2000)	188.0	2.0	50.7
PANIES (Russell 3000)	223.4	2.0	27.8

N STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
(FINANCIAL TIMES 100)	2546.5	0.5	24.5
IIKKEI INDEX)	24,416.2	−1.3	2.0
(TSE COMPOSITE)	3596.9	1.9	15.0

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.77%	4.74%	7.3%
30-YEAR TREASURY BOND YIELD	7.87%	8.01%	8.5%
S&P 500 DIVIDEND YIELD	3.10%	3.16%	3.7%
S&P 500 PRICE/EARNINGS RATIO	22.0	21.6	14.7

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.5	383.7	Positive
Stocks above 26-week moving average	56.0%	52.6%	Negative
Speculative sentiment: Put/call ratio	0.37	0.40	Neutral
Insider sentiment: Vickers sell/buy ratio	2.51	2.75	Negative

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

VEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
ERAGE FIRMS	19.9	161.9	PAINEWEBBER GROUP	40.8	178.8	34 ½
	19.0	118.5	HASBRO	25.0	158.9	36 ¼
NSURANCE	12.7	49.9	JEFFERSON PILOT	18.2	67.1	58 ½
LINE INSURERS	11.8	33.4	CIGNA	21.6	52.0	56 ¼
AL PRODUCTS AND SUPPLIES	11.4	59.0	MEDTRONIC	18.7	89.5	83 ¼
VEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
AOBILES	−11.7	−7.8	GENERAL MOTORS	−14.1	−12.6	32 ⅞
NAL LOANS	−9.9	80.5	HOUSEHOLD INTERNATIONAL	−14.7	103.7	47 ⅞
ND GAS DRILLING	−9.5	−35.9	ROWAN COMPANIES	−14.3	−49.1	6 ¾
ESTATE INVESTMENT TRUSTS	−7.4	−8.9	LOMAS & NETTLETON MORTGAGE	−15.4	−52.2	1 ⅜
TAL MANAGEMENT	−6.1	−9.3	COMMUNITY PSYCHIATRIC CENTERS	−16.4	−52.2	13 ⅜

FUAL FUNDS

MORNINGSTAR INC.

S

k total return	%
NHEIMER GLOBAL BIO-TECH	13.6
Y STRATEGIES	13.5
TY SELECT BROKERAGE & INVESTMT.	12.9

total return	%
NHEIMER GLOBAL BIO-TECH	152.3
TY STRATEGIC HEALTH SCIENCES	107.9
WEIS EMERGING GROWTH	105.3

LAGGARDS

Four-week total return	%
STRATEGIC SILVER	−6.4
UNITED SERVICES GOLD SHARES	−6.3
G. T. JAPAN GROWTH	−4.3

52-week total return	%
STRATEGIC INVESTMENTS	−19.5
FIDELITY SELECT ENERGY SERVICE	−15.6
STRATEGIC GOLD/MINERALS	−14.2

ATIVE PORTFOLIOS

DATA RESOURCES INC

mounts
nt the present
f $10,000
d one year ago
portfolio
ages indicate
total returns

U. S. stocks
$12,836
+2.07%

Foreign stocks
$12,030
−0.28%

Treasury bonds
$11,974
+1.60%

Money market fund
$10,548
+0.10%

Gold
$9,222
−0.22%

n this page are as of market close Wednesday, Nov. 13, 1991, unless otherwise indicated. roups include S&P 500 companies only; performance and share prices are as of market close Nov. 12. Mutual fund returns are as of Nov. 8. Relative portfolios are valued as of Nov. 12. A more detailed explanation of this page is available on request

THE RIGHT Rx: MANAGED CARE

Democrat Harris Wofford's capture of a U. S. Senate seat is a harbinger of the 1992 election in one respect: Health care was a critical issue in the Pennsylvania campaign. And the Bush Administration, now under pressure to devise its own health care blueprint, seems sure to hustle out a plan before the election.

Its program will join a host of proposals already thrown into the hopper by Democrats, who believe they can capitalize on an issue with broad appeal (page 28). The explosion of activity is a welcome sign that the government will at last take a serious look at reforming the medical system.

Most plans under consideration aim to provide coverage to everyone—a laudable goal. But any reform effort should also provide some incentive to reduce spiraling costs.

The proposal with perhaps the broadest support right now is the Democrats' "play or pay" scheme. This plan would require employers to play, by offering workers insurance coverage, or else pay a tax into a government fund to buy coverage for the uninsured. But it does little to curb prices or doctors' penchant for ordering ever more services.

A proposal backed by conservatives would provide vouchers to let individuals buy their own coverage, thus replacing employer-sponsored plans. But this scheme likewise provides no incentive to keep costs down.

Yet another plan—a single-payer system modeled on Canada's—would provide universal coverage and allow the government to control costs. But it sets up a cumbersome bureaucracy that, as one wag puts it, would offer Internal Revenue Service sensitivity and congressional efficiency at Pentagon prices.

The best solution is the managed-care concept described—and endorsed—by BUSINESS WEEK in the Oct. 7 issue. It has the backing of Democratic Presidential aspirant Paul E. Tsongas. Managed care combines free-market elements with government regulation. Consumers would be able to choose among large health care networks, receiving coverage from their employers or through quasi-governmental regional insurance brokers, either of which would have enough buying clout to keep prices in line. Any effective reform measure needs to be comprehensive to make sure that cures for the system aren't worse than its current ills. Managed care is the only proposal that fits the whole bill.

MAKING COMPANIES MORE 'FAMILY-FRIENDLY'

It's no secret that some corporate bureaucracies aren't much help when it comes to the personal problems of their employees. And that goes double for problems besetting employees' families. This is despite plenty of evidence that unattended family problems lead to increased absenteeism, tardiness, and stress-related health proble

Striking new testimony that most companies do li can be found in a "family-friendly" index compiled by ar dependent research group from a survey of the benefits programs offered by 188 major employers (page 234). Th companies averaged a score of only 68 points out of a sible 610 on the index, and only two scored higher than The usual reasons cited by companies for a poor showing cost and the possibility that giving benefits to one gr may amount to discrimination against another. But reasoning overlooks that employees are human capital, t invested in and maintained with at least as much car plant or machinery. Besides, there is substantial down risk in ignoring family welfare. Once the recession e many economists expect shortages of skilled worker persist through the 1990s. Companies without family-fri ly policies could find it tough to recruit and keep highly tivated, productive employees, especially if their competi get a head start.

The questions used in compiling the index amount checklist of programs and benefits, including flexible w arrangements, on-site centers or vouchers for child or e care, and rating of managers in part on how well they with family issues. Not every suggestion applies to ev company. But for employers who believe that a happy w er is a productive one, there's plenty of food for thoug

STOP SOAKING CREDIT-CARD SHOPPERS

The Fed and the White House are trying to get inte rates down, in order to coax the cautious consu back into a buying mood. But if that consumer cha purchases to a credit card, the interest rate is apt to stunning 19.5%—enough to put a damper on any buyer's

The credit-card rate has been flirting with 20% in spi a dramatic decline in what banks have to pay for mo Since mid-1990, the federal funds rate has been cut 13 t and now stands at just 4.75%.

Why have things reached this ugly pass? The answ that Washington, still stunned by the savings and loan bacle, is treating the banking system with kid gloves. B cite the cards' unsecured-credit aspect as justificatio such high rates—yet they're snowing mailboxes with ne count solicitations.

The truth is that the wide spread between what b pay for money and what they charge consumers for it subsidy to an industry that is rightly seen as shaky. It's true that, despite lip service to lower rates, Washingto tolerated and even encouraged banks to soak the consum to prop up the industry.

On the evidence, banks seem ready to ignore Presi Bush's call for lower credit-card rates. But the banks realize that if they do not heed the call, they may not the other things they want—such as interstate banki And for their part, regulators and politicians should subsidizing banks by allowing outrageous rates on consu loans. It is time to end this charade.

December 2

HIGH TECH: WHO'S GROWING FASTEST
STRATEGIES
▶AVON
▶BELL ATLANTIC

BusinessWeek

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EMBER 2, 1991 A McGRAW-HILL PUBLICATION $2.50

HIGH ANXIETY

THE ELUSIVE RECOVERY WORRIES CONSUMERS, BUSINESS—AND NOW THE STOCK MARKET. BUSH IS BETTING THAT THE ECONOMY WILL CORRECT ITSELF. WILL HE WIN? PAGE 28

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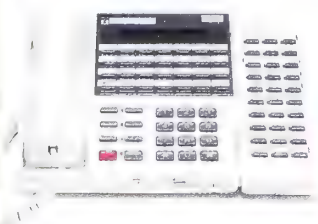

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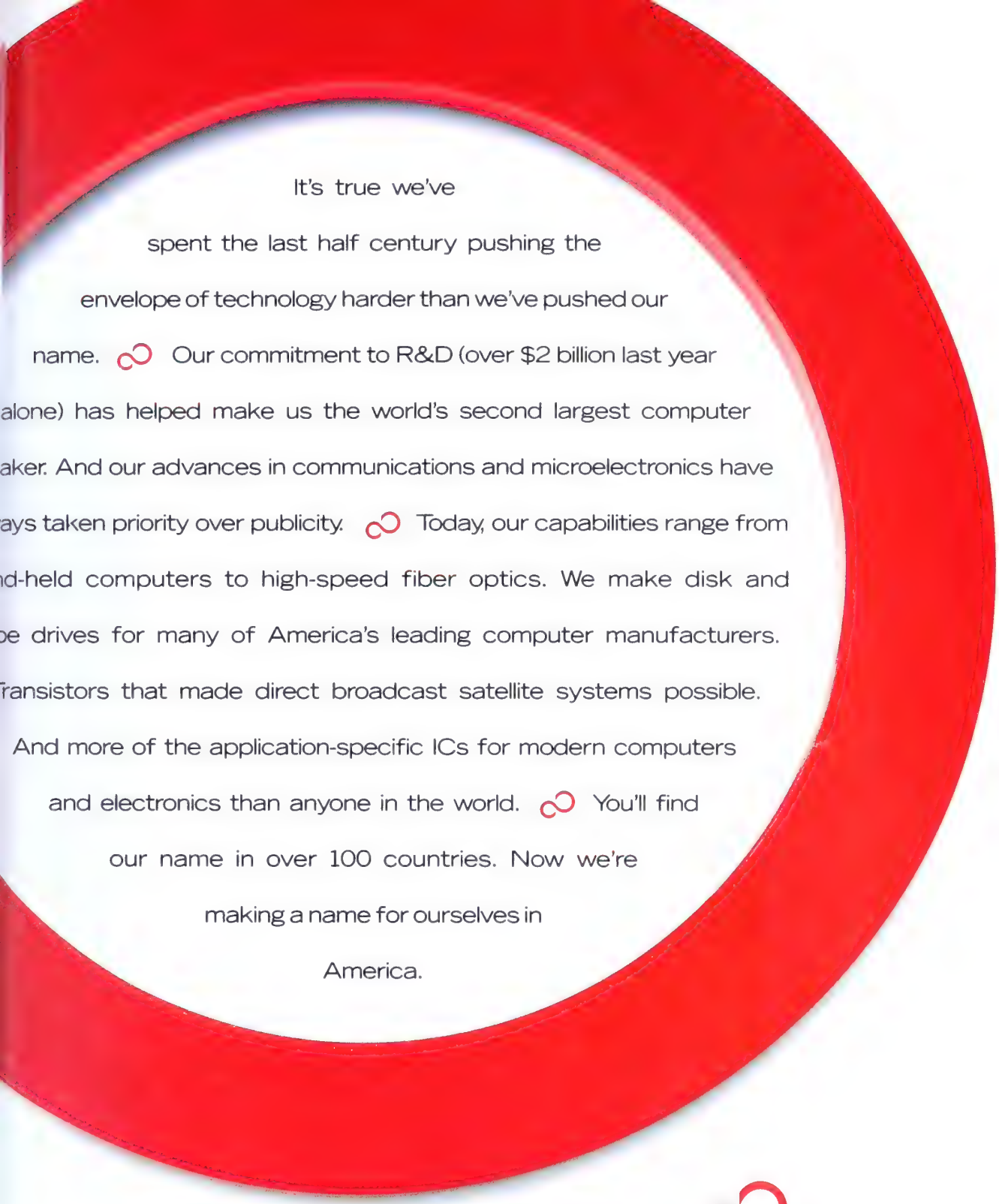


FUJITSU

COMPUTERS, COMMUNICATIONS, MICROELECTRONICS

Reflect upon this for a moment.

You are sitting, rather nervously, in the waiting room outside of a typical automotive service garage.

Your ears are being subjected to the incessant clanging of tools and high-pitched whir of power drills. (Not unlike what you'd hear in your favorite dentist's chair.)

A feeling of queasiness wells up, as you watch the clock extract precious dollars from your wallet.

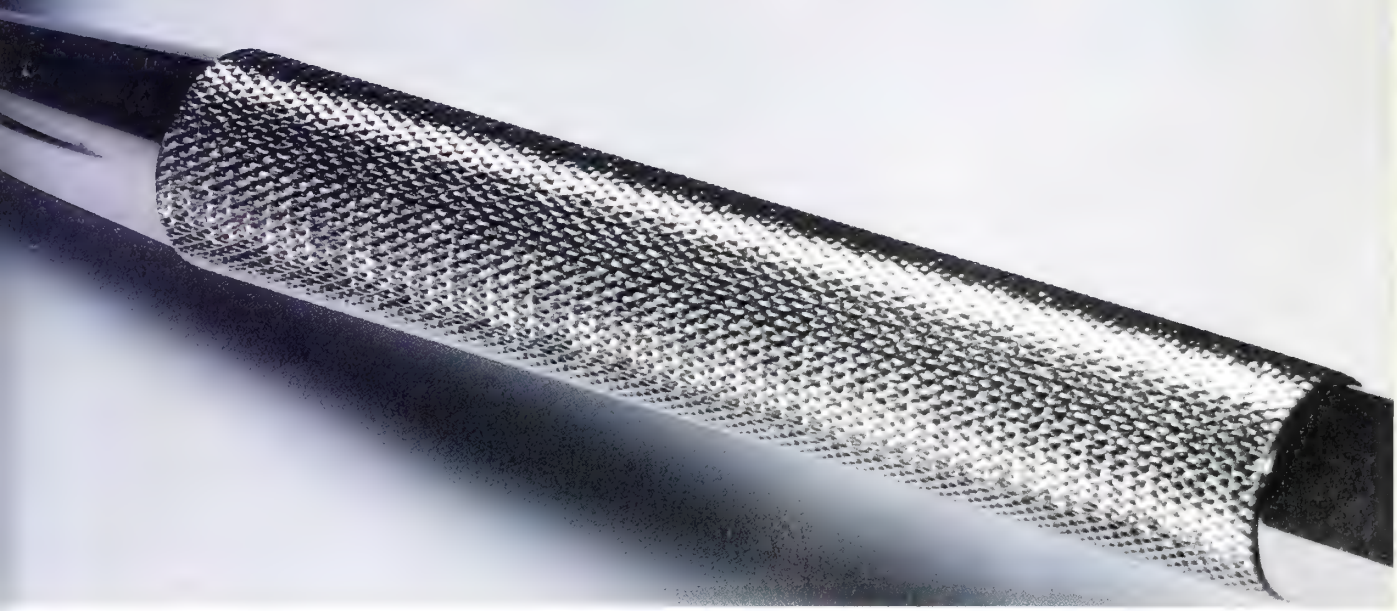
Now then, for those who disdain this all-too-familiar scenario, BMW recommends an automobile tha disdains it too: the new 525i.

A sedan so advanced, its engine requires little regular maintenance beyond the periodic routine of changing oil, filters and spark plugs.

A computer-controlled engine

*See your BMW dealer for details on this limited warranty. **Services provided by Cross Country Motor Club, Inc., Boston, MA 02155, except in CA, where services are provided by Cross Country Motor Club of Calif., Inc., Bost

IN A 525i, YOUR CHECKUPS WILL BE VIRTUALLY PAINLESS.



hose tappets hydraulically fine-
ne themselves. So the valves
ever need to be re-synchronized.
Best of all, perhaps, an engine
hose direct ignition system has
ompletely eliminated the need
r a mechanical distributor.

All of which could very well end up saving you a tidy sum in parts, time and labor charges.

To say nothing of unexpected expenses. Because every 525i is backed by a 4-year/50,000-mile bumper-to-bumper warranty* and by BMW's Roadside Assistance.**

To arrange a thorough test drive, call 800-334-4BMW. We think it just might be one of those rare appointments you'll actually choose to prolong.

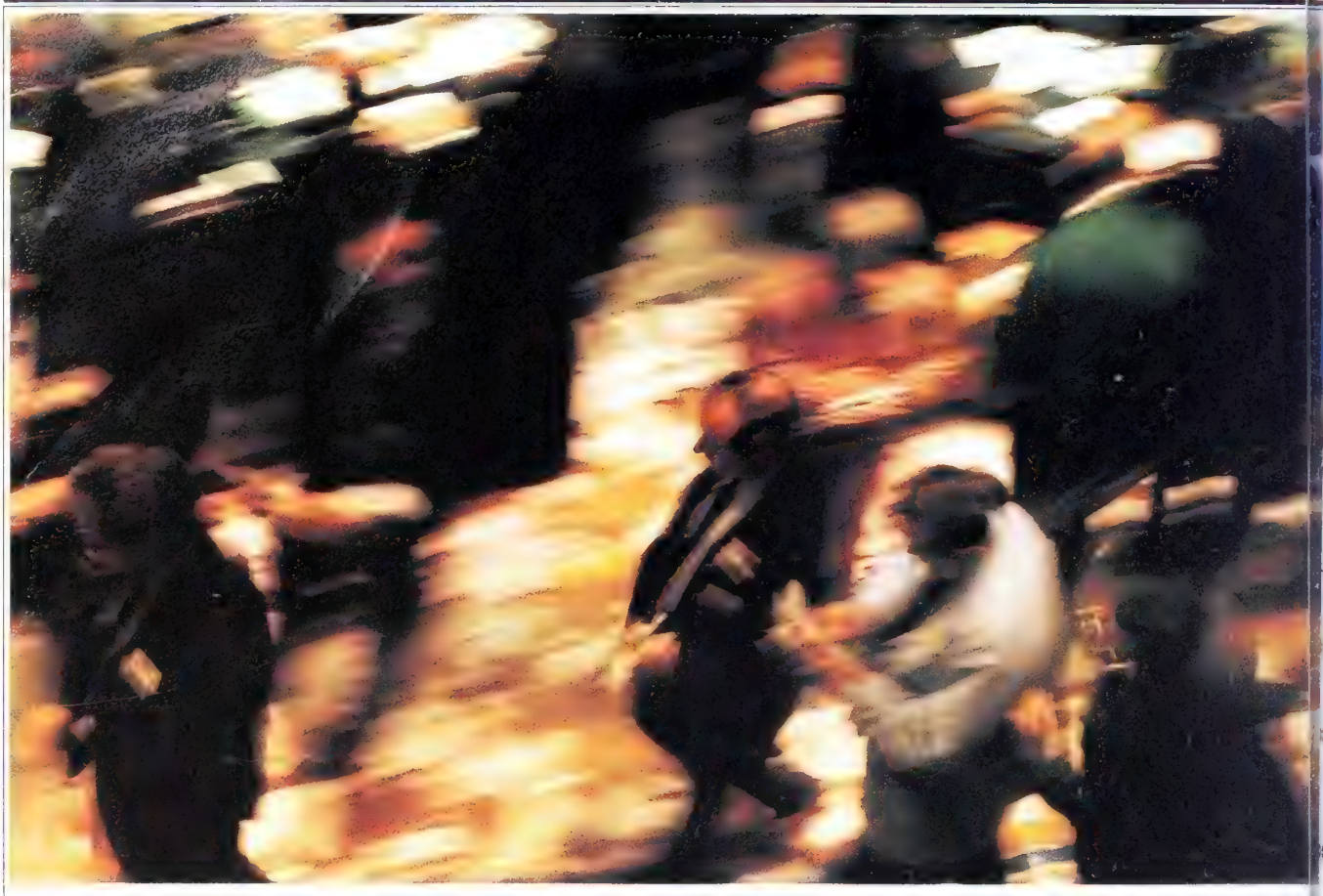
THE ULTIMATE DRIVING MACHINE.

991 BMW of North America, Inc. The BMW trademark and logo are registered

NUMBER 3242

BusinessWeek

DECEMBER 2, 191



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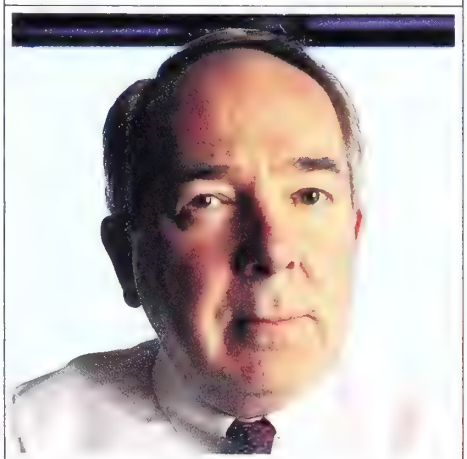

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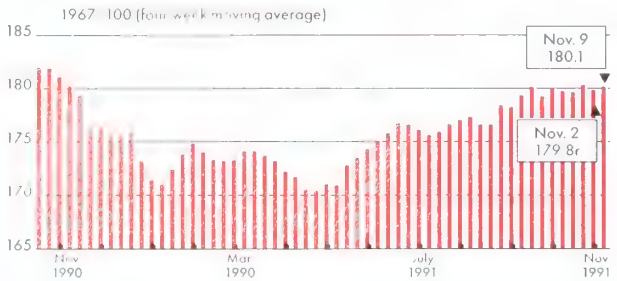
BusinessWeek Index

PRODUCTION

Change from last week: 0.2%
Change from last year: −0.1%

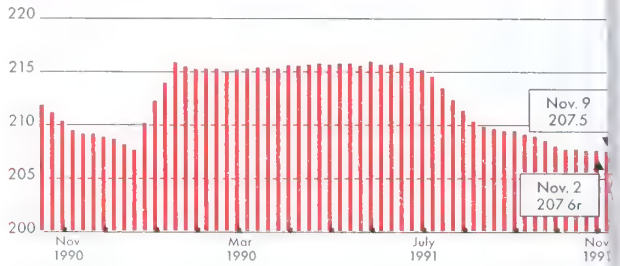


The production index was up slightly for the week ended Nov. 9. On a seasonally adjusted basis, output of trucks and cars increased strongly, while electricity and paperboard production rose as well. Paper and steel output declined, while production levels of crude-oil refining, coal, lumber, and rail-freight traffic were unchanged from the previous week. Before calculation of the four-week moving average, the index advanced modestly to 181, from 177.6 in the previous week.

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: −0.1%
Change from last year: −0.9%



The leading index continued its four-month decline during the week ended Nov. 9. A large jump in the number of business failures led the drop, but falling stock prices and real estate loans, plus slower growth in M2, also contributed. On the positive side, bond yields were lower and the change in materials prices improved. Before calculation of the four-week moving average, the index dropped slightly to 206.7 from 207.2 in the week before.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/16) thous. of net tons	1,814	1,753#	−4.9
AUTOS (11/16) units	136,656	122,763r#	35.4
TRUCKS (11/16) units	73,427	79,643r#	26.5
ELECTRIC POWER (11/16) millions of kilowatt-hours	54,268	56,634#	4.2
CRUDE-OIL REFINING (11/16) thous. of bbl./day	12,761	12,624#	0.3
COAL (11/9) thous. of net tons	19,471#	19,327	−8.9
PAPERBOARD (11/9) thous. of tons	791.9#	792.9r	4.5
PAPER (11/9) thous. of tons	755.0#	785.0r	1.6
LUMBER (11/9) millions of ft.	493.9#	495.2	11.5
RAIL FREIGHT (11/9) billions of ton-miles	20.4#	20.5	1.9

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (11/20)	130	130	127
GERMAN MARK (11/20)	1.60	1.63	1.49
BRITISH POUND (11/20)	1.79	1.77	1.97
FRENCH FRANC (11/20)	5.47	5.59	5.01
CANADIAN DOLLAR (11/20)	1.14	1.13	1.16
SWISS FRANC (11/20)	1.42	1.45	1.25
MEXICAN PESO (11/20)	3,048	3,059	2,930

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (11/20) $/troy oz.	362.600	356.550	−4.6
STEEL SCRAP (11/19) #1 heavy, $/ton	94.00	94.00	12.1
FOODSTUFFS (11/18) index, 1967=100	206.1	204.6	−2.5
COPPER (11/16) ¢/lb.	110.6	111.1	−8.1
ALUMINUM (11/16) ¢/lb.	52.8	53.4	−28.6
WHEAT (11/16) #2 hard, $/bu.	3.69	3.74	33.2
COTTON (11/16) strict low middling 1-1/16 in., ¢/lb.	54.26	55.20	−22.0

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Chan year a
STOCK PRICES (11/15) S&P 500	393.41	391.11	23
CORPORATE BOND YIELD, Aaa (11/15)	8.43%	8.55%	−9
INDUSTRIAL MATERIALS PRICES (11/15)	95.4	95.5	−7
BUSINESS FAILURES (11/8)	434	400	24
REAL ESTATE LOANS (11/6) billions	$396.1	$396.2r	2
MONEY SUPPLY, M2 (11/4) billions	$3,398.4	$3,400.9r	2
INITIAL CLAIMS, UNEMPLOYMENT (11/2) thous.	454	420	1

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans.

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Chan year a
INDUSTRIAL PRODUCTION (Oct.) total index	108.2	108.2r	−1
CAPACITY UTILIZATION (Oct.)	79.6%	79.8%r	−4
CONSUMER PRICE INDEX (Oct.)	137.4	137.2	2
RETAIL SALES (Oct.) billions	$152.9	$153.0r	0

Sources: Federal Reserve Board, BLS, Census Bureau

MONETARY INDICATORS

	Latest week	Week ago	% Chan year a
MONEY SUPPLY, M1 (11/4)	$884.0	$883.8	7
BANKS' BUSINESS LOANS (11/6)	296.5	295.7r	−9
FREE RESERVES (11/13)	805	979r	11
NONFINANCIAL COMMERCIAL PAPER (11/6)	135.6	133.3r	−12

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Ye ag
FEDERAL FUNDS (11/19)	4.78%	4.89%	7.80
PRIME (11/20)	7.50	7.50	10.00
COMMERCIAL PAPER 3-MONTH (11/19)	4.97	5.02	7.85
CERTIFICATES OF DEPOSIT 3-MONTH (11/20)	4.92	5.03	7.97
EURODOLLAR 3-MONTH (11/16)	4.98	5.01	7.95

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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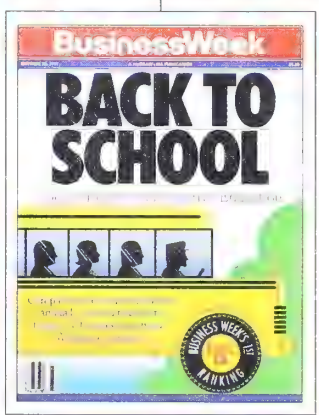
Readers Report

BACK TO SCHOOL: REPORT-CARD COMMENTS

I was heartened by the focus on Executive MBA programs in "Back to school" (Cover Story, Oct. 28). For people in managerial positions, the executive format is the most practical and productive way to earn the MBA without disrupting a demanding career.

I'd like to dispel, however, the impression that Executive MBA programs all look "like the virtually all-male, all-white MBA classes of the 1950s." At Baruch College, 41% of our Executive MBA students are women, and nearly 28% come from minority groups.



I'm sure that the positive experience of Baruch students is not unique and that other executive programs reflect the modern work force more faithfully than the quote above would suggest. The image of those 1950s-style classrooms shouldn't deter anyone from exploring the Executive MBA option.

Karen E. Dennis
Director, Executive Education
City University of New York
Bernard M. Baruch College
New York

You report that women and minority groups were not well-represented in nondegree executive programs. But we have found that they like the Executive MBA format. Our 13th class, which graduated last June, included 23% women and 10% minority members. We believe that the degree is an important magnet, worth the demanding pace for 18 months.

Wesley W. Marple Jr.
Coordinator, Executive MBA Program
Northeastern University
Boston

It is ironic that "big corporations simply aren't committed to helping women and minorities to the executive suite," even though they often set up special programs to recruit them and costly seminars to sensitize managers to workforce diversity.

Considering my own credentials, however—an MBA from a top-20 school and a decade of experience in the largest insurance and energy companies—I now agree with your editorial conclusion.

Like many other self-confident and capable minorities, such as Justice Clarence Thomas, I opposed affirmative action, but it nevertheless has opened doors for many women and minorities, qualified or otherwise. Surely, many of us have executive-level capabilities, and it is time to move forward. Unfortunately, large companies, accustomed to being followers, are unlikely to lead the way.

Sean Tseng
Houston

I have a bit of advice for potential MBA students: Consider taking an educational leave, if you can swing it. It is absolutely the best way to learn. But if you do choose educational leave, get a commitment for your return, and get it in writing.

Lloyd F. Copenhaver
Indianapolis

Permit me to suggest a few improvements that would better reflect the international situation of executive training. Had you surveyed overseas regional headquarters of American companies, IMD [International Institute for Management Development] and other European business schools would have figured high on the list. Indeed, 2,500 senior managers pass through IMD's programs each year.

The average annual revenue from executive education among the top 20 schools in your report stands at under $8 million. These figures hardly reflect the total being spent by American companies on management training, not to mention non-American companies: At IMD alone, annual revenues from executive training exceed $20 million.

Prestigious U.S. companies such as

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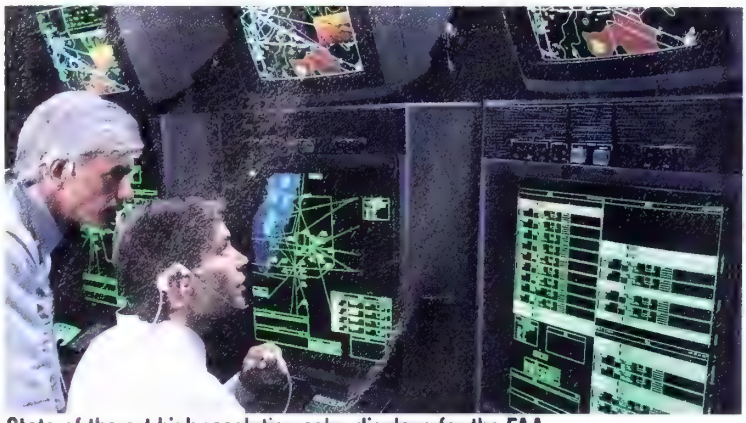

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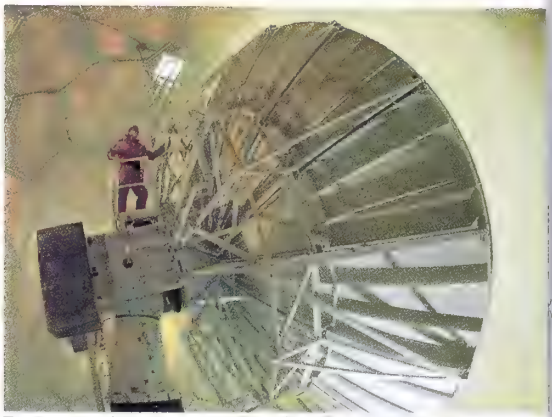

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Citicorp, Digital Equipment, Dow Chemical, IBM, Du Pont, General Motors, Grace Industrial Chemicals, and others not only send employees to IMD but also support the school through their membership in our Business Associate Network, comprising 100 companies from 26 different countries.

In sum, I believe your survey does a disservice to those forward-thinking American companies that have shaken off their parochial management-training shackles and recognized the value of executive education in a truly international environment.

Juan Rada
Director General, IMD
Lausanne, Switzerland

As a publishing executive and a member of Wharton's EMBA class of 1992, I was disappointed, particularly at the characterization of Wharton as the "most pricey program with biweekly sleepover . . ."

For the record, Wharton's sleepover elevates teamwork among students, faculty, and administrators to a level that could not be achieved if we went our separate ways at the end of each day of class. Virtually every sleepover includes evening meetings on team projects or class-review sessions—the latter often conducted by distinguished members of the faculty.

It is not surprising that Wharton's ratings differ from those of other programs. Ratings are a function of raters' expectations and experiences. Unlike many other programs, Wharton screens applicants through a rigorous admissions process.

As a result, my classmates have distinguished academic records and are leaders in such diverse fields as engineering, medicine, law, banking, and consulting. Their leadership and achievements derive, in part, from their high expectations and an irreverence for the status quo.

Patrick M. Rockelli
Alexandria, Va.

HANDLE B-SCHOOL RANKINGS WITH CARE

We applaud your continued interest in business schools and in particular Executive MBA programs ("The top 20 for executive MBAs," Special Report, Oct. 28).

Rankings, however, obscure the differing missions, objectives, and constituencies of business schools. The dramatic differences between your MBA, Executive MBA, and Executive Education rankings reflect these differences.

Business schools are not unlike the business press: Both have many different target markets and product offerings. While rankings make interesting copy, the market is the ultimate authority—and by all accounts the market is rating us well.

Kevin Ferti
Chai
EMBA Counc
Champaign, Il

We at Wharton were pleased at th recognition your recent articl gave to Executive MBA programs as a emerging format for graduate busines education. We would like, however, t clarify two important aspects.

First, to display the ratings of Execu tive MBA graduates on teaching, curricu lum, and payback using an "A, B, C, D scale distorts the data unnecessarily Your survey asked respondents to ran teaching, curriculum, and payback on scale of 1 to 10 (where 10 = best). Thus to "grade on a curve" and label a ratin

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f, say, 7 or 8 as a "D" because it falls n the bottom quartile of responses is rbitrary.

Second, to list programs' tuition without acknowledging the wide variety in ne type, quantity, and quality of elements that programs include in their harges is misleading. Wharton's EMBA, or example, provides about one-third nore instructional content (i.e., class ours) than some of the programs with hich it was compared.

Arnold J. Rosoff
Director, Wharton School
University of Pennsylvania
Philadelphia

HE U.S. IS BLOCKING GROWTH N TELEPHONE NETWORKING

Your article "Super phones" (Special Report, Oct. 7) painted an exciting icture of an advanced telephone network of the future that would change ne way people live and work.

Unfortunately, while Europe and Jaan are moving fast to develop such networks, progress in the U. S. is bogged own by laws that do not give telephone ompanies the economic incentives that ney need to build the reliable, high-peed, fiber-optic-based networks of the uture.

While recent actions of the Federal Communications Commission, which would allow telephone companies to provide video-transmission services, are certainly a move in the right direction, legislative action is also needed to let companies offer video services to consumers. This will trigger the investment and service development to usher in the vision of the future described in your article.

J. L. Johnson
Chairman & CEO
GTE Corp.
Stamford, Conn.

CORRECTIONS & CLARIFICATIONS

In "The profit rebound that never was" (Corporate Scoreboard, Nov. 18), we misstated the sales of Commerce Clearing House Inc. Sales for the third quarter were actually $146.5 million, unchanged from last year, and for nine months they were $537.1 million, down 2% from a year ago.

"Picture perfect" (The Quality Imperative, Photo Essay, Oct. 25) should have identified Eastman Kodak Co. as the developer of a new scanner that helped produce the film *Terminator 2.*

TAX CAPITAL GAINS ON A SLIDING SCALE

"How America can get the 'patient' capital it needs" (The Corporation, Oct. 21), gets to the heart of the problem but avoids the obvious answer: a capital-gains-tax change.

With the possible exception of the trouble caused by the U. S. having more than 750,000 lawyers, a lack of long-term capital-gain incentives is industry's most serious problem. It seems so simple to tax capital gains on a holding-period sliding scale, from 100% during the first year to 0% after X years. (I have no strong opinion on what X should be, but five years seems about right.)

I think that, with this change, U. S. corporations would adopt longer-range strategies, an absolute necessity for competing with the Japanese.

Alan F. Shugart
President & CEO
Seagate Technology
Scotts Valley, Calif.

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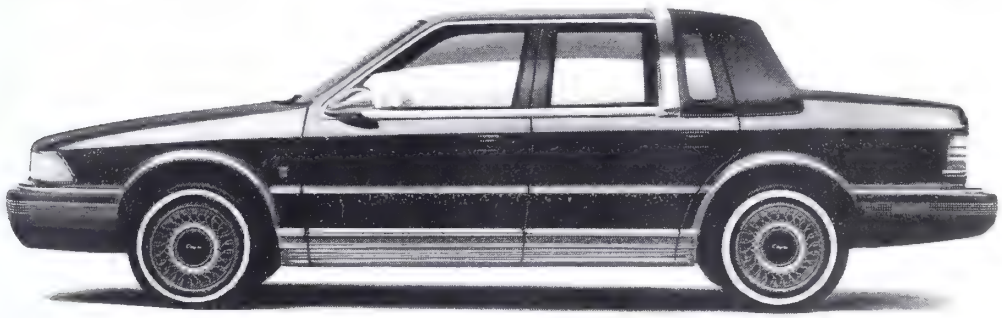

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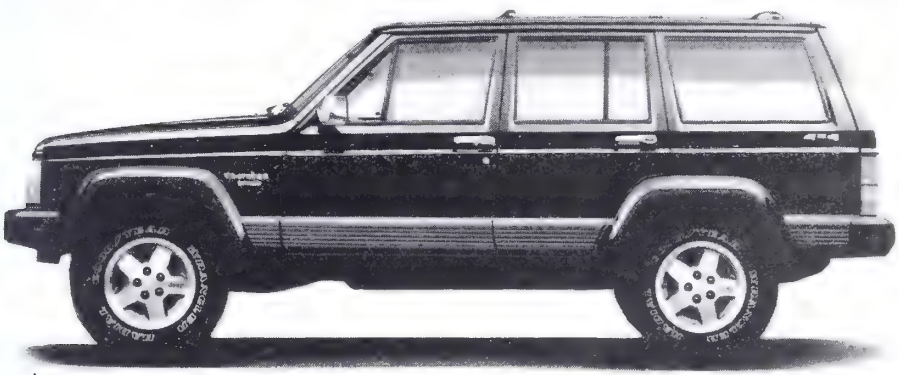

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GOING FOR BROKE
By John Rothchild
Simon & Schuster • 286pp • $21

HE SHOPPED TILL HIS EMPIRE DROPPED

Robert Campeau is one of the more bizarre businessmen to emerge during the last decade. Here is a man who blew a big deal because, in the midst of negotiations, he took off to Brazil for a facelift. Who for five years shuttled between an official family in Ottawa and a secret one in Montreal. Who took sheep-brain injections to live longer and once faked a hole in one to win a company golf tournament.

All this would be only mildly interesting chatter had Campeau not been at the center of one of the 1980s' biggest financial disasters. Between 1986 and 1988, he charmed, cajoled, and bullied his way into buying two of the biggest department store conglomerates in the U. S.—Allied Stores Corp. and Federated Department Stores Inc. The two companies, owners of such stores as Bloomingdale's and Brooks Brothers, had plodded along profitably for decades. Campeau drove them into bankruptcy in no time.

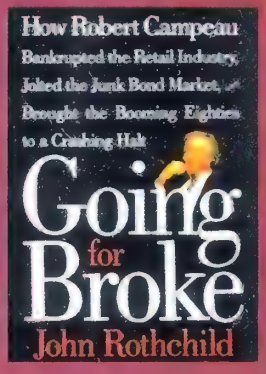
He had the help of Wall Street's heavy hitters, including mighty Citicorp and brash First Boston Corp. They backed him—a retailing novice with virtually no cash to put down—to the tune of $11 billion. As John Rothchild reveals in his fast-paced, often comical *Going for Broke*, audacity, ego, and the tireless pursuit of fees ($800 million between the two deals) had a lot to do with it. Campeau and his lenders "took each other to the extremes of wishful number crunching, while ignoring the many danger signs, not the least of which was Campeau himself."

Before he got to Wall Street, Campeau, a mechanic's son from an Ontario mining town, had made a name in Canada as a builder of office towers and shopping malls. But he remained an outsider to Canada's business elite. After members of that club thwarted his takeover of two large Canadian trust companies, he decided to head south.

His first plan was to buy a U. S. savings and loan, but after putting Shearson Lehman on the case, he left for his facelift. When the deal collapsed, Rothchild says, he tried to renege on Shearson's $100,000 finder's fee. The incident foreshadowed later deals in which Campeau vanished at key moments and was loath to part with any of his own money.

Next, he decided to take part in the leveraged buyout of R. H. Macy & Co., but as an unknown, he didn't even get in the door to see Macy's Chairman Edward S. Finkelstein. Ironically, the two would one day meet in Finkelstein's Manhattan townhouse to divide the spoils of their bidding war for Federated. Finkelstein got some coveted Federated chains, and Campeau got the company—an arrangement that would leave both monumentally overburdened.

Campeau didn't sink Federated and Allied alone: He had help from the Street's heavy hitters



At last Campeau turned to Allied, taking the Macy's deal as his model. "He quickly grasped the facts of an LBO," Rothchild writes, "the cash flow, the added value, how you could sell off the parts to pay the debts . . ." But as Campeau would learn, uneven cash flows make retailers poor LBO candidates.

Even close associates at Campeau Corp. didn't take his quest seriously at first. But with "quirky bravado," Campeau enlisted the help of an impressive bunch, including First Boston's celebrated mergers and acquisitions specialist, Bruce Wasserstein. His bankers and lawyers relaxed many rules of prudent lending, going so far as to let Campeau borrow most of the $300 million in equity he needed. Even Wasserstein reached new heights of creativity: first, in a ranging a $700 million bridge loan fo the hostile deal, then in organizing "Street Sweep" that allowed Campea to buy enough stock on the open marke to gain control of Allied.

Although Rothchild, also the author o *A Fool and His Money*, didn't intervie Campeau for the book, he does an adm rable job of capturing the developer eccentric yet engaging personality an the insecurities that drove him. Whil maintaining a relatively narrow focu Rothchild places the story in the contex of '80s excess, likening Campeau to Do ald Trump and other "Debtor Barons who speculated with borrowed money.

After he completed the $4.1 billion a quisition, Campeau took steps to cut A lied's bloated management. To the relie of his lenders, he exacted absurdly i flated prices for several Allied chain He also hired Robert Morosky, an oper tions expert formerly of The Limite Inc., to make the numbe work in a softening reta climate.

But just months late he decided to go afte Federated, and the whol financial circus bega again. First Boston had new motive to swing th deal: It wanted to prove could play the M&A gam without Wasserstein, wh had left. In January, 198 before he even had f nancing commitment Campeau launched a $4 a-share tender offe Competing bidders soo drove the price to $73.5

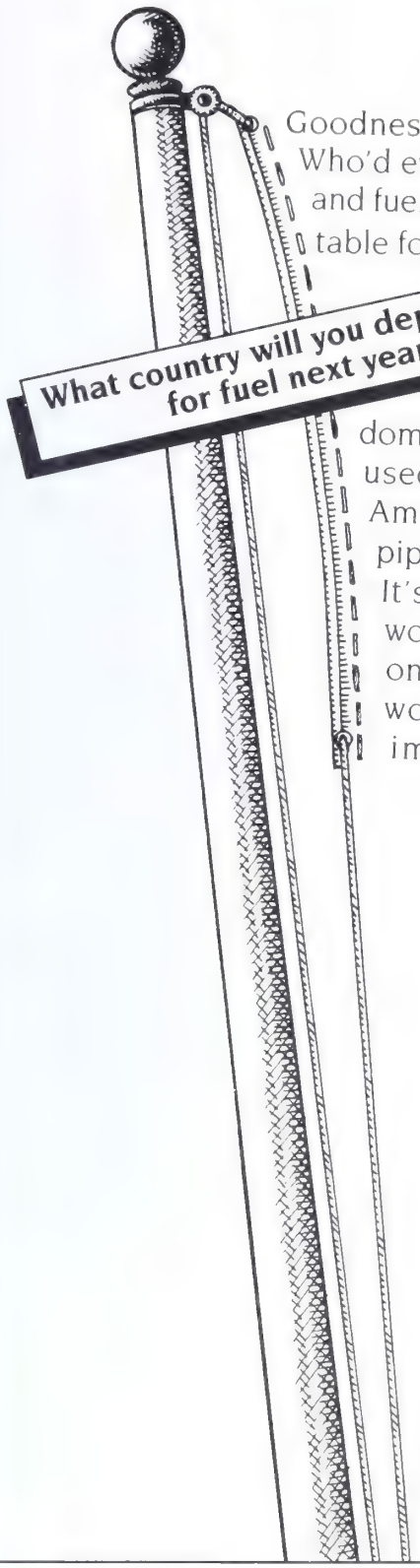
No way could Campea pull it off this time, eve with equity infusions from Canada's bi lionaire Reichmanns. Not only had h overpaid, but Morosky quit after Can peau broke a promise to make him CE

In less than two years, the situatio blew up. Allied and Federated filed fo Chapter 11 reorganization in Januar 1990, leaving 50,000 creditors with $8 billion in claims. First Boston, whic held millions in devalued Campeau junk needed a $650 million bailout from it parent, Crédit Suisse. Campeau wa forced into personal bankruptcy and lo the chairmanship of Campeau Corp.

In the end, Rothchild writes, the pub lic will pay for the Campeau-style spree of the 1980s through higher taxes an bailouts of troubled banks. That we'r finding more bargains at departmen stores these days is small consolation.

BY AMY DUNKI

Associate Editor Dunkin covered the Allie and Federated takeovers.



What country will you depend on for fuel next year?

Goodness, how dependent we've become on foreign oil. Who'd ever think that when it came to heating our homes and fueling our cars we'd have to rely so much on unpredictable foreign sources. Aren't we tired of being held hostage to whatever prices these countries want to charge? Isn't it time we depended on ourselves for our own fuel and energy? Well millions of Americans already are, by using domestic natural gas. In fact, virtually all of the natural gas used in North America is produced right here in North America. And it's being delivered through a natural gas pipeline that's over one million miles long. (And growing.) It's a dependable and continuous flowing pipeline network including advanced pipeline technologies. Gas is not only accessible, abundant, and efficient, but it's also the world's cleanest burning fossil fuel. And perhaps most importantly, it's ours. Truly, the energy of America.

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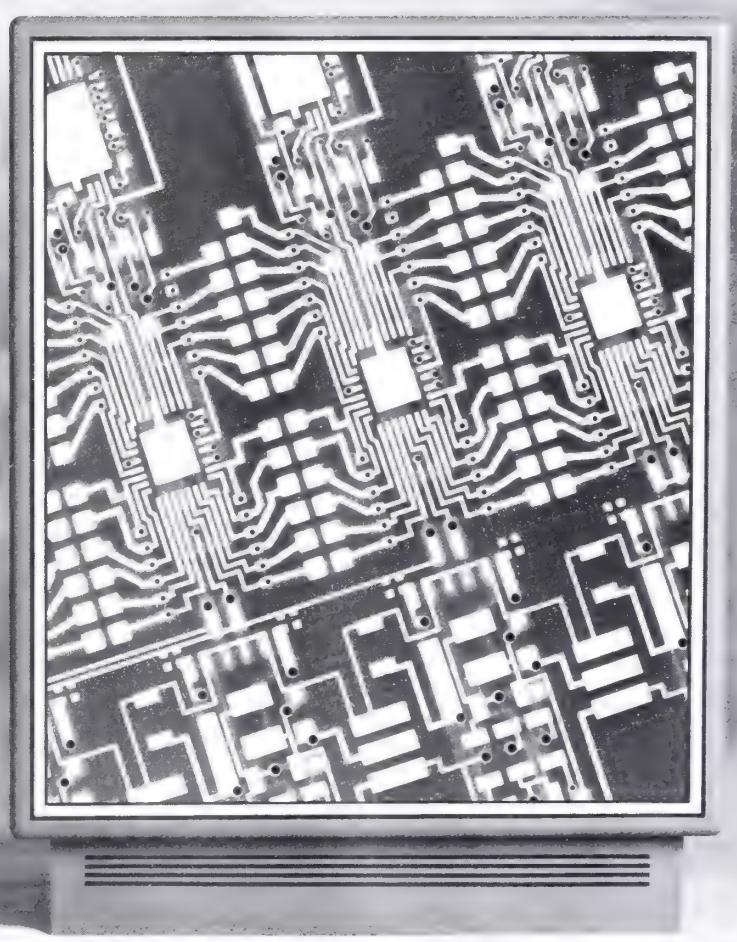

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WORKING WOMEN'S STAUNCHEST ALLIES: SUPPLY AND DEMAND

BY GARY S. BECKER

American women are entering the professions at a breathtaking pace, and market forces —along with civil rights legislation— are steadily improving their economic position

GARY S. BECKER IS UNIVERSITY PROFESSOR OF ECONOMICS AND SOCIOLOGY AT THE UNIVERSITY OF CHICAGO

Working women have plenty of problems in the workplace, as we were reminded so dramatically during the Clarence Thomas hearings. Yet those problems stand in stark contrast to women's rapid progress in occupations and earnings compared with men's since the late 1970s. The U. S. is getting much closer to granting equal pay for equal work, regardless of gender or family situation.

The proportion of married women who work has increased continuously: Now, more than 60% of married women with young children hold jobs. Women in the 1970s and '80s entered many professions at a breathtaking pace. They make up some 40% of the students in schools of law, medicine, business, architecture, and journalism, and are a small but rapidly growing share of those majoring in engineering. The percentage of male college graduates going on to law school has actually fallen since 1970, while females in the legal profession have risen from a negligible share in the early '70s to almost 25% now.

Median earnings of women working full time were comparatively stable from 1960 to 1979, at about 59% of the earnings of men—which means a gender gap of about 41%. But then, as reported in the Census Bureau's *Money Income of Households, Families and Persons*, the gap began a steady fall, dropping below 30% in 1990. I expect it to continue to fall throughout this decade.

Even 30%, however, overstates the true gap, since female full-time workers put in about 10% fewer hours a week than male full-time workers, and they have less previous job experience. The gap between men and women working the same hours and with the same experience is well under 20%.

LAME EXCUSE. The most important reason for women's progress is their increasing presence in the labor force, as the nature of the family has changed. Birth rates have dropped more than 35% since the late 1950s, freeing women from child care duties. Rapid expansion in the number of jobs in the service sector has let women combine child care with part-time work and flexible schedules. The exploding number of divorces after the mid-1960s forced women with dependent children to earn a living and provided a warning to married women that they should be prepared to work in the event their marriages should break up. Young women who have entered professions and other skilled occupations during the 1970s and 1980s continue to advance into more responsible positions, even if a "glass ceiling" has kept most from getting to the very top.

Not long ago, some women lost their jobs when they married. Women employees wer paid much less than men, sometimes becaus of outright discrimination rationalized by th lame excuse that they were not the mai breadwinners. The atmosphere created by civ rights legislation and the women's movemer help combat such policies. These were no however, the main forces behind their prog ress, since the gender gap in earnings did n begin to decline until more than a decade an a half after passage of the far-reaching Civ Rights Act of 1964. Women advanced mos rapidly during the Reagan and Bush Pres dencies—surely no more active in civil right enforcement than previous Administration Moreover, not all minority groups advance during the 1980s: Black men fell a little furthe behind white men.

Women's substantial progress during th '80s helped muffle the call for more radic legislation to aid them. There is much les support now than a decade ago for the sill system of government wage-setting figure on the basis of "comparable worth," the in evitably arbitrary judgments of statisticiar and bureaucrats about what the pay should b in different occupations. Rapid entry of wome into prestigious occupations has also quiete the call for quotas. Even supporters conced quotas aren't really what they have in mind

MOTHERS' HELPER. Instead, the drive to ai women is concentrating on other kinds of in tervention in labor markets. Current favorite are mandatory, unpaid leave for parents whe children are born or get sick and mandator child care facilities at work. Bills in Congres would make child care leave available to eithe parent, but the example of Sweden—whic has a liberal leave system—suggests that a most all would be taken by women.

Forcing business to provide leave is both in efficient and unjust. It in effect discriminate against single persons and against marrie women and men with no children or wit grown children. It's one thing to call for gender-neutral productivity test for pay hike and promotions, but another to make bus ness give preference to persons with youn children. And while the present proposals ar mild, everyone knows they are only a firs step toward the Swedish system of requirin full pay for employees on child care leave.

The law of supply and demand, along wit civil rights legislation, is steadily improving th economic position of U. S. women. Extensiv intervention in labor markets to help them unwarranted and will do more harm than goo in implementing the principles of equal pa and equal employment opportunities for equ work.

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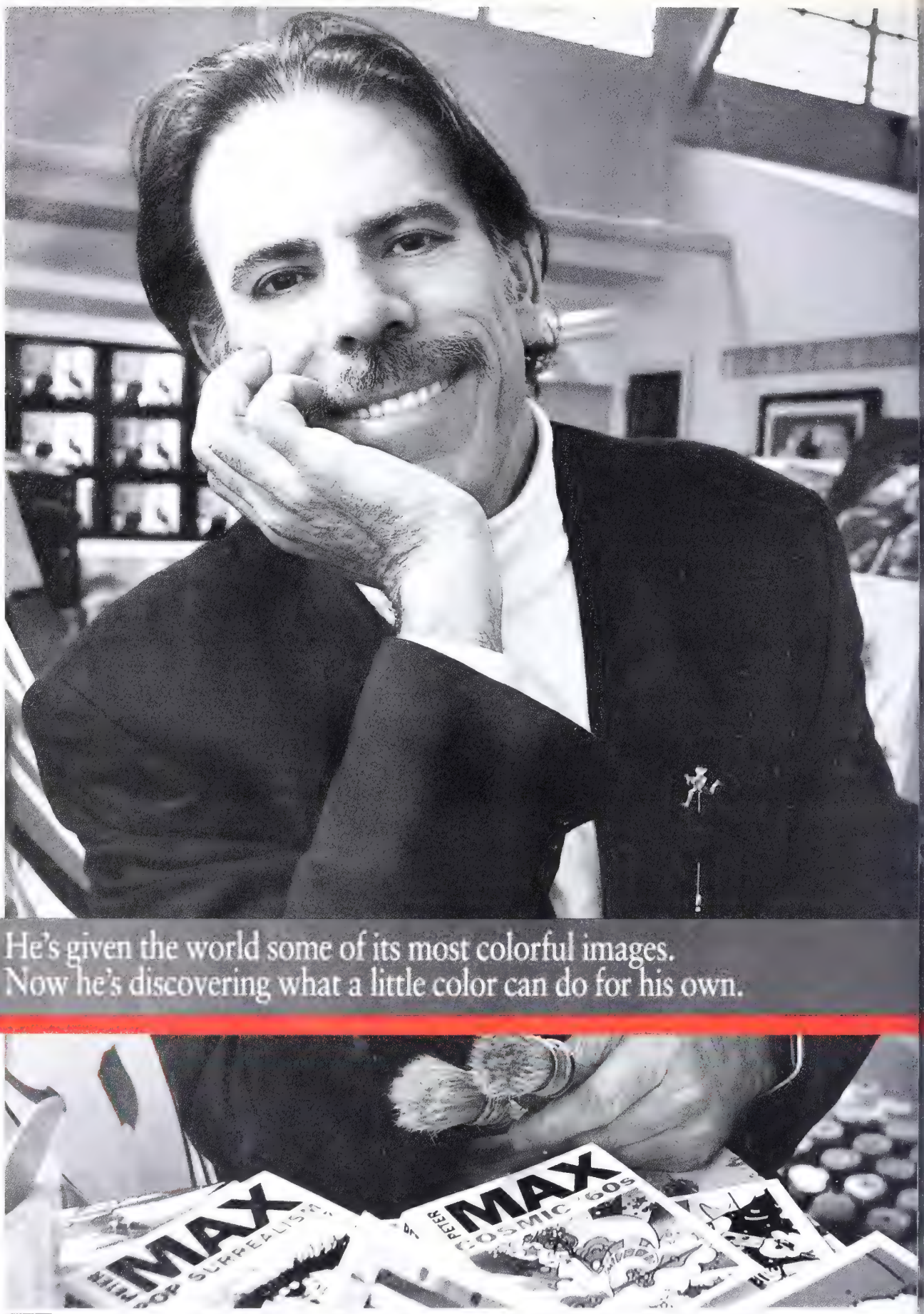

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BY GENE KORETZ

SOCIAL SECURITY'S PROJECTED SURPLUS KEEPS SHRINKING

Judging by recent trends, the Social Security surplus won't be alleviating the government's budgetary woes as much as experts had expected. Robert Marks of SOM Economics Inc. notes that actual surpluses in recent years have been falling increasingly short of official projections "due to slower revenue growth and faster gains in outlays."

In fiscal 1991, for example, the surplus was $10 billion below the level projected by the Congressional Budget Office last January and $22 billion below the level projected in early 1990. And in the current fiscal year, Marks thinks the surplus will come in $20 billion below the CBO's projection last January.

The rub is that each shortfall contributes to the following year's shortfall because trust-fund assets and the interest earnings they generate rise more slowly than projected. Thus, Marks expects fiscal 1995's Social Security surplus to come in as much as $50 billion below the $128 billion projected by the CBO just 20 months ago.

SANTA MAY BRING SAD TIDINGS TO THE ECONOMY

The jury is out on whether the economy is merely experiencing some unsettling turbulence after clearing the recessionary runway last quarter or is actually headed down again. For most economists, the verdict rests on the strength of retail sales in the holiday shopping season now getting under way.

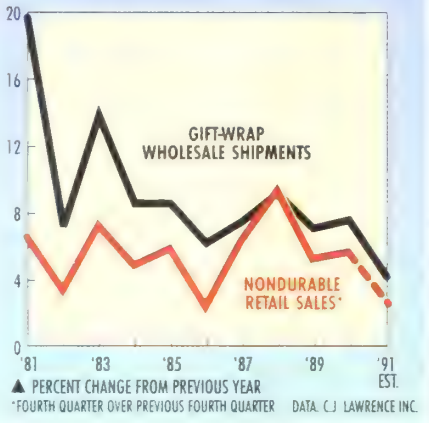
"Half of annual spending in many retail categories," notes economist Roger E. Brinner of DRI/McGraw-Hill, "comes in the November-December spree." If Christmas sales prove depressed, post-holiday inventory building will suffer, weakening near-term production and employment prospects.

One somewhat offbeat omen of Christmas retail sales is the so-called Appert Gift-Wrap Indicator. For the past seven years, Peter P. Appert, an analyst at C. J. Lawrence Inc., has been tracking shipments from the five major gift-wrap manufacturers to retailers in the period just before Christmas. "Presumably, if retailers are optimistic about sales prospects for Christmas," Appert says, "they will be aggressive in ordering this highly seasonal product and vice-versa."

Appert's reading this year won't bring economy-watchers much cheer. "Growth in gift-wrap sales," Appert says, "is at its lowest level in over 10 years, suggesting that sales of apparel and other nondurables will be up less than 3% over last Christmas."

Even that view could prove optimistic, according to DRI/McGraw-Hill's Brinner.

GIFT-WRAP SHIPMENTS SIGNAL A BLUE CHRISTMAS



He thinks that many retailers have been unusually conservative in adding to stocks, both because of fears of slack consumer demand and because of difficulty in obtaining credit. "If stocks on shelves are too sparse," he warns, "consumers will buy fewer goods."

FOREIGN STUDENTS SCOOP UP MORE AMERICAN PhDs

The foreign contingent studying in U. S. graduate schools is starting to dominate the ranks of doctoral students in key subject areas, notes the Washington-based Council on Competitiveness. Over half of the PhDs in engineering, mathematics, and economics awarded by American universities last year went to non-U. S. citizens. And foreigners earned over 45% of the doctorates in computer sciences and physics and astronomy.

Although expenditures by foreign college students in the U. S. are helping to reduce the trade deficit (BW—Nov. 4), the council is concerned about another aspect of the student influx: U. S. graduate schools in the sciences are increasingly becoming the training ground for foreigners who are acquiring skills and knowledge that will eventually boost their own countries' competitiveness vis-à-vis the U. S.

HOW CRACKING DOWN ON DRUGS CAN FOSTER MORE CRIME

Does escalating the war against dru result in a decrease in theft, bu glary, and other property crimes? Not it involves shifting resources away fr deterring property crimes directly, cla economists Bruce L. Benson and Dav W. Rasmussen of Florida State Unive sity. In a study published in the late issue of *Contemporary Policy Issues*, th conclude that the resource reallocati that accompanied stronger drug law e forcement efforts in Florida during t 1980s actually led to more proper crimes—despite the presumed caus connection between drug addiction a criminal activity.

The two economists note that Flo da's police devoted a growing share their resources to drug law enforceme during the 1980s. Drug arrests rose 90 between 1982 and 1987, while total a rests increased only 32%. But inste of subsiding in the wake of the steppe up war against drugs, property crim also escalated. Between 1983 and 198 for example, robbery rates climbed 34 and auto theft rates jumped 65%.

In the past, economists have explaine such increases in crime by noting th drug users have an inelastic demand f drugs. Since greater enforcement drug laws presumably drives up dru prices, addicts have to step up the criminal activities to pay for their habi Yet the price of cocaine, the most in portant drug in Florida, fell dramatica ly in the second half of the 1980s— trend that should have reduced th property crime rate if the "drugs caus crime" argument is valid.

Benson's and Rasmussen's study sug gests an alternate hypothesis: that risin property crime in Florida was partly byproduct of increased enforcement drug laws. Their analysis indicates tha as more resources are allocated agains drug crimes, the probability of arres for property crime falls. Such a declin in arrest probability, they speculate, re sults in a rise in property crime rate because fewer career criminals are ap prehended and because fewer potenti criminals are deterred from crime.

The upshot, say the two economist is that while drug use may often induc property crimes, enforcement of dru laws can also "cause" such crimes by lim iting the resources targeted agains them. The best way to control propert crime, they suggest, is to focus enforce ment efforts directly on such crime.

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CEMBER 2, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

THE RECOVERY WAS A LEMON TO BEGIN WITH. NO WONDER IT BROKE DOWN

A few weeks ago, you could argue that people were too gloomy about the economy. Not any more. Since late summer, the recovery's engine has it firing on one cylinder after another. Housing nked, then autos, then retail sales. Now, as inventories e up, growth in industrial output has withered. By st measures, the weak recovery has ground to a halt. Wall Street is beginning to share Main Street's uneasi-ss. The stock market is in its worst sell-off in two ars. Share prices tumbled on Nov. 15 and slipped rther on Nov. 19, mostly reflecting worries about the covery and Washington policy (page 28). The market's mp only feeds the sour mood of consumers and busi-sses. Moreover, a stock shock now could be a death w to a fragile recovery. The market plunges in Octo-r, 1987, and October, 1989, turned out to be benign, rtly because the economy was stronger then.

The economy is not simply the victim of a national mood swing. The recovery is stalling out because it was built on shaky fundamentals. The pick-up in consumer spending after the gulf war started a virtuous cycle that shrank inventories and generated orders and production that lifted the economy.

However, job growth remained weak, while consumers ent twice as fast as their incomes were growing. Sav-gs dried up, and debts didn't go away. The economy's b of interrelated structural problems in government ance, real estate, and banking didn't go away, either. ose problems still weigh heavily on demand.

ARE U.S CONSUMERS IN A DEEP COMA?

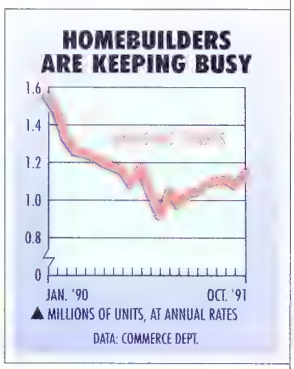
With all this falling back on consumers, that virtuous cycle is now starting to unravel. Spending has fallen behind output, and retail inventories are starting to lge (chart). Retail sales fell by 0.1% in October, and e August and September data were revised lower. ter adjusting for inflation, sales began this quarter out even with their third-quarter level.

Car buying is in particular trouble. Sales at dealer-ps fell 0.3% in October. And car sales in early Novem-r were a disaster, another worrisome sign that con-mers just aren't consuming.

Other retailers, however, aren't much busier. Nonauto es were flat in October and haven't risen since July. rchases at furniture, department, and apparel stores fell in both September and October. Receipts at these stores are back to where they were in June.

The big danger for the fourth quarter is that consumers are retrenching just as the important holiday shopping season gets under way. The latest findings on household attitudes are ominous. The University of Michigan's preliminary reading of its index of consumer sentiment shows a steep decline in November. That drop suggests that the plunge in the Conference Board's October index of consumer confidence was not a fluke.

Consumers' concerns are not misplaced. Companies continue to announce layoffs, especially in the white-collar ranks. And new claims for unemployment benefits jumped to a 454,000 annual rate in early November, the highest pace since May.



These worries are holding back the recovery in homebuilding. Housing starts rose by 7.3% in October, to an annual rate of 1.1 million (chart). Homebuilding is up by 29% since hitting its low point in January, but the rebound has been modest by the standards of past recoveries.

Starts of multifamily units, up 26.2% in October, accounted for the bulk of the month's increase, while single-family homes rose 3.9%. However, that increase came on the heels of a 13% plunge in sales of new homes in September, the largest drop in 2½ years.

The sales drop-off raises questions about the strength of home demand, which could temper builders' enthusiasm in coming months. The sharp fall in mortgage rates—now down to their lowest level since 1977—is not offsetting consumer worries about future job and income prospects.

STOCK ROOMS ARE STARTING TO BULGE

With those concerns keeping shoppers away from their local malls, retailers are bracing for a Christmas that only a Scrooge could love (page 36). If those expectations become reality, unwanted inventories will build up further, and retailers will finish the year with bulging warehouses. That will lead to cuts in output, payrolls, and profits in 1992.

It may already be happening. Business inventories jumped 0.6% in September, following no growth in July and August and declines during the five previous months. The September increase was the largest since July, 1990, and it was concentrated in retail trade. How-

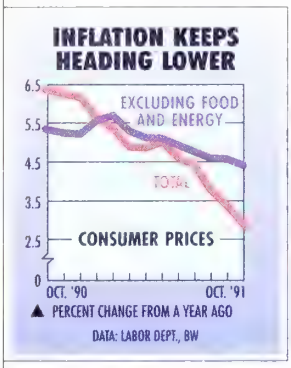
ERIC HOFFMANN/BW

ever, with retail buying going nowhere, much of that accumulation appears to be unintended.

Retail inventories rose 1.5% in September, the largest increase in three years. Since June, stockpiles held by retailers are up 2.2%, while retail sales have increased a mere 0.3%. The October sales decline didn't help matters.

A SILVER LINING: NO PRICE PRESSURES

The growing problem of retail inventories carries one benefit for holiday shoppers: It brightens the inflation outlook. Merchandisers may have to discount heavily to move their goods. Already, inflation at the retail level is moderating, and more improvement is likely.



The consumer price index rose a mere 0.1% in October. Excluding food and energy, the core rate of inflation was also up a small 0.1%. The gains in the total CPI and the core rate were the smallest since March. Over the past year, both measures of inflation have come down considerably (chart).

The stellar performance of the October CPI was important because it came on the heels of October's alarming 0.7% jump in producer prices, which seemed to suggest that inflation was flaring up again. The CPI report lays that fear to rest. Weak domestic demand is preventing businesses from making price hikes stick. Prices for clothing, new cars, and toiletries, for example, have dropped back after increasing in the summer. Prices for goods, excluding food and energy, fell 0.1% in October.

However, while retailers are marking down items in an attempt to move inventories out the door, they will not be ordering very heavily from manufacturers. Already, the buildup of inventories appears to be taking a toll. Factory orders fell in both August and September, and industrial production has been flat since July, after rising 0.7% per month during the four previous months.

Production in the nation's factories, utilities, and mines was unchanged in October, following a 0.2% gain in September and a 0.1% decline in August. Output in manufacturing was also flat last month. Going into the fourth quarter, industrial output was barely above its third-quarter level. And the industrial operating rate fell from 79.8% in September to 79.6% in October.

The outlook for manufacturing gains in coming months is not good. In addition to the slowdown in domestic demand, foreign shipments are slipping as well. Although exports rose by $1 billion in September, to $34.4 billion, that was only their second increase in the past five months. Exports are no higher than they were in April.

Factories must also deal with America's insatiable appetite for imports. They rose even more than exports in September, widening the trade deficit to $6.8 billion, from $6.5 billion in August. A lot of domestic demand continues to bypass U. S. producers.

The immediate problem for manufacturers, though, is that the production of consumer goods, up 0.3% in October, has gotten far ahead of demand. Since April, output has risen at an annual rate of 8%. Auto makers accounted for much of that rise, but housing-related durable goods and nondurable goods alike contributed to the growth as well. During the same period, however, real retail sales have grown at a pace of only 1.5% (chart).

That divergence makes it easy to see why retailers are getting into an inventory problem. Getting out of it is likely to cost the industrial sector, and the economy plenty—and at a time when this sputtering recovery can least afford it.

THE WEEK AHEAD

CONSUMER CONFIDENCE

Tuesday, Nov. 26, 10 a.m.

The Conference Board's index of consumer confidence probably dropped to about 59 in November from 60.4 in October, say economists polled by McGraw-Hill Inc.'s MMS International unit. But that small decline would follow a sharp 12.5 point fall in the index in October. The November forecast is suggested by the preliminary report from the University of Michigan that its survey of consumer sentiment also fell in November. Worries about future job layoffs and sluggish income growth is furrowing consumer brows. The expected index would be the lowest reading on consumer confidence since the Persian Gulf war, and it would suggest that retail sales will be dismal during the Christmas shopping season.

DURABLE GOODS ORDERS

Wednesday, Nov. 27, 8:30 a.m.

New orders taken by durable goods manufacturers likely rose by 1% in October, say the MMS economists. Demand for autos and defense equipment likely lifted the October numbers. Orders had jumped by 11.7% in July but then fell by 4.1% in August and 3.2% in September. Those declines in new demand suggest that the backlog of unfilled orders was probably little changed in October, after falling 0.7% in September. A smaller backlog means industrial output will make little headway in coming months.

PERSONAL INCOME

Wednesday, Nov. 27, 10 a.m.

The MMS economists expect that personal income increased by just 0.1% in October, after growing 0.5% in September. However, wages and salaries probably declined, and falling interest rates likely dragged down interest income in October as well. Drops in those two major income categories may mean a decline in the total earnings number. The MMS consensus also calls for a 0.2% increase in consumer spending in October, following a 0.9% surge in September. Gains in service purchases will offset an expected decline in spending on goods. In particular, car buying, which led the September gain, fell back in October.

JAIME BEAUCHAMP/BW

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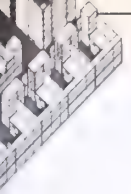

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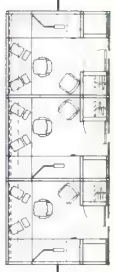
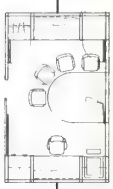
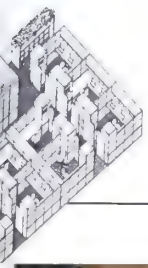


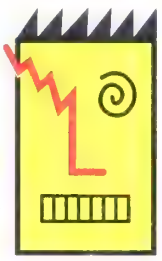




WANG **OFFICES THAT WORK**

A NATION ON EDGE

AMERICANS GET MORE ANXIOUS AS BUSH PLAYS FOR TIME



It's the Panic of '91. No, not the sort of financial scare that sent stockbrokers diving out of windows, produced runs on banks, and heralded the Great Depression. Things aren't nearly that bad today. But a few months into a sputtering recovery, the economy is wracked by a paralyzing fear that keeps consumers at home—and sends Washington policymakers into a frenzy.

The recovery can't seem to get started. The recession hit bottom in the spring, just when the pundits said it would. But instead of bouncing back smartly, the economy acts as if someone let the air out of it. "A foul mood is prevailing around the nation," says former Federal Reserve Governor Lyle E. Gramley. "The momentum of the spring has largely vanished." And instead of helping, Washington is adding to the national anxiety attack.

The economy is creating about 47,000 new jobs a month. That's adequate to keep the unemployment rate just below 7% but not nearly enough to restore consumer confidence. Instead, news of more and more layoffs and rising state and local taxes have dulled Americans' spending instincts.

Corporate earnings are improving, but they're still rotten, leaving executives gloomy and financial markets on edge (page 33). Retailers are looking forward to the holiday season with all the Christmas spirit of Ebenezer Scrooge (page 36). Manufacturers aren't feeling much better. Says David H. Hoag, chief executive of LTV Corp.: "People are just afraid to fork over the dough. They've convinced themselves that the economy isn't any good."

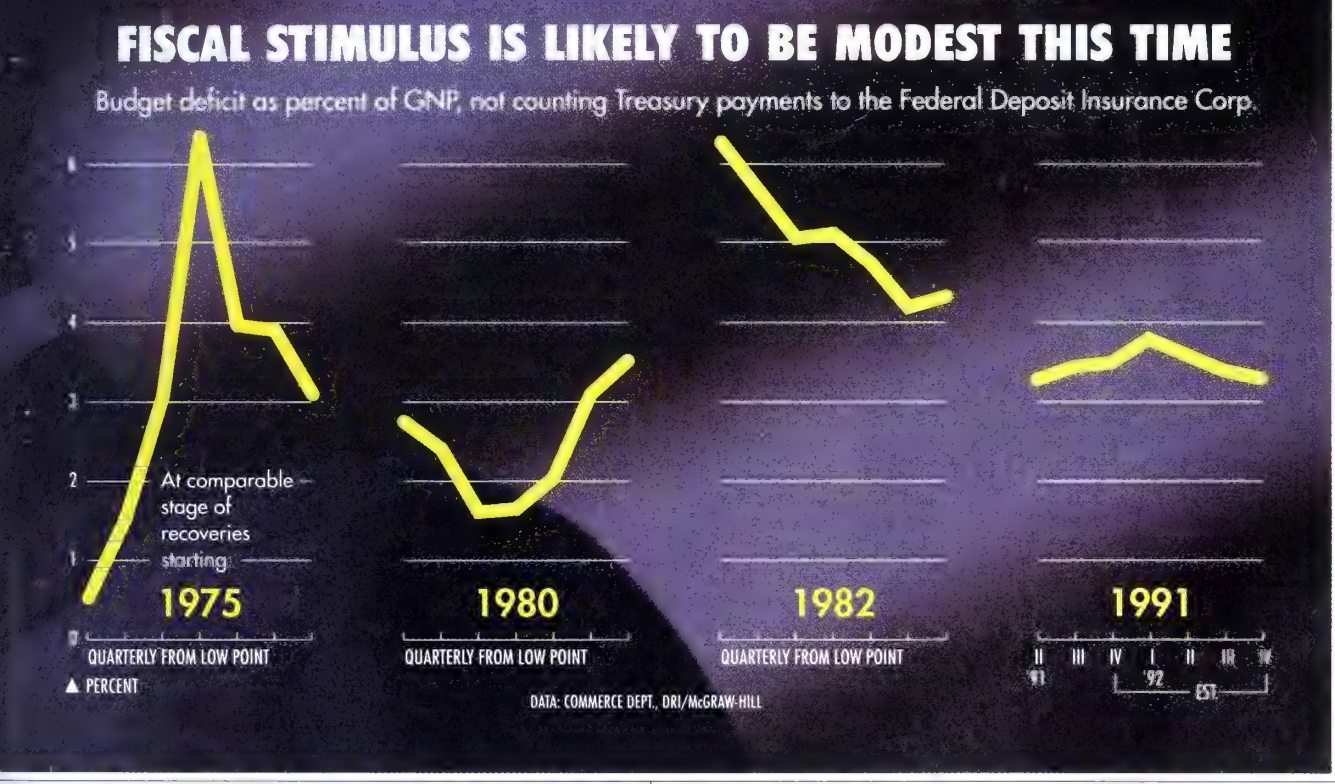
FATEFUL DECISION. Ironically, the economy is being hobbled because consumers and businesses are finally heeding advice that they work down the mountain of debt they acquired in the go-go 1980s. Companies knocked about $6 billion off of their interest payments in the first half of this year. And households have cut consumer debt by about 10% in the past year. In the long run, this reliquification will help enormously. But in the short term, it suppresses both consumer demand and business spending.

All this helps explain why the most nervous man in this jittery nation is the occupant of 1600 Pennsylvania Ave. Faced with a rising clamor for some policy action to kick the economy into a higher gear, George Bush has made a fateful decision to sit tight until next year. If Administration economists are right, growth will accelerate in the next couple of months and the outlook will be much brighter come spring.

But if they turn out to be over-optimistic, the economy will b in serious trouble. And Bush will face a struggle for politic survival, not the walkover reelection campaign he expected.

Trouble is, Bush's actions so far may have needlessly cor plicated prospects for both his campaign and for the econom Once he recognized the recovery was going nowhere, th President reacted quite uncharacteristically. He got rattle and, in back-to-back blunders, sent shock waves through th financial markets. First, he sent bonds tumbling by fuelin talk of a quick-fix tax cut. No sooner had investors calme down than Bush threw a scare into the stock market b hectoring banks to cut their credit-card rates. Far worse, Sen tor Alfonse M. D'Amato (R-N. Y.) took Bush at his word ar

"I'm just going to stay the course and try to get programs enacted that have been stymied by the Congress. . . . It's not like we're dealing with a totally bad economy"



ushed a bill capping credit-card rates through the Senate. Perhaps worst of all, Bush vacillated. One day, he'd sympathize with victims of the recession and announce that "all is ot well" with the economy. On others, he'd cite statistics nowing that the recovery is on track. "I'm just going to stay he course and try to get programs enacted that have been ymied by the Congress," Bush said on Nov. 18. "It's not like e're dealing with a totally bad economy."

TALLING. Main Street is not buying it. "We have suppliers, ompetitors, and friends in business who haven't felt good bout the world for a full year," says Bernard Marcus, chairan of Atlanta's Home Depot Inc. "But the President says here is no problem. Who's he kidding?" Adds University of Massachusetts professor Ralph Whitehead: "His approach to the economy is an exact replica of the Democratic approach to the Persian Gulf: 'Let's give it time, and it will all work out.'"

Time is just what Bush wants. He won't begin talking about a recovery strategy until Congress leaves town. And what finally appears in his January State of the Union address will have a familiar ring: Cut capital-gains taxes, expand individual retirement accounts, provide some tax relief for the middle class, and offer a few incentives for business investment. The only new twist may be a modest health-insurance plan.

Supply siders are livid at Bush's refusal to push broad new tax cuts to get the economy moving now. But most mainstream economists agree that standing pat is the best course,

CHART'S BY ERIC HOFFMANN/BW

no matter how fainthearted it may appear. They fear that a big antirecession program would spook credit markets, driving up rates. "Doing nothing is probably the best thing," says Laurence Meyer & Associates economist Joel Prakken.

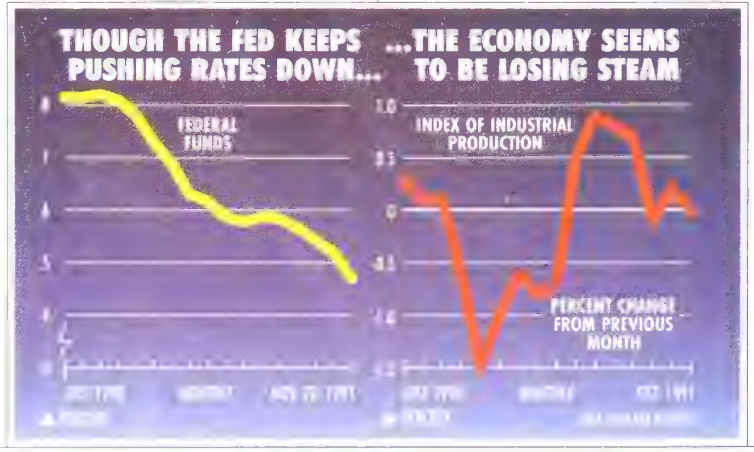
Many executives fear that a quick fix is worse than useless. "I already see the next recession in the making," says Reynolds Metals Chairman William O. Bourke. "The pump will be primed too much. A boom will be followed by a bust faster than the up-and-down of a toilet seat at a gas station."

Economists and many executives would prefer to see Bush focus on long-term economic problems, such as education, health care, infrastructure, and lowering the cost of capital. "All these are sound investments," says Bay-Banks Chairman William M. Crozier Jr. "If the Administration had a program for the future, financing it wouldn't be a problem."

That's easy for him to say. But the political system faces severe difficulty in finding new money for even the worthiest of programs. In past business cycles, Washington has used tax cuts and increased spending to pump money into the economy and speed recovery. But in earlier recessions, the deficit was small until the economy tanked. This time around, the red ink was running at 3% of gross national product before the slump began (chart, page 29). That sharply limited government's ability to use fiscal policy to juice up the economy. Even worse, so much of federal spending—more than $100 billion this year for bailing out financial institutions and nearly $200 billion for interest on the debt—does little to stimulate the economy.

GREENSPAN IS WORRIED THAT OVEREASING WOULD ACTUALLY DRIVE RATES UP

TRAPS. So Bush is in a box. Bond traders, ever fearful of inflation, won't stand for anything that widens the deficit. Bush refuses to raise tax rates. Congress won't cut spending. The benefits from defense cuts are years away. And in any case, notes Prakken, "there is no such thing as a deficit-neutral countercyclical fiscal policy." That's not the only trap. Consumer spending may be the ticket to a strong recovery. But most economists say the long-term health of the economy depends on savings and investment, not consumption (pages 34-35). For a decade, politicians have decried low savings rates. Now, they want consumers to spend. Bush has practically begged them to hit the malls and get "cash registers ringing at Christmastime." But the pols can't have it both ways. "If you want to reduce debt," says American Enterprise Institute economist John Makin, "spending has to drop radically relative to income. You get a very precipitous drop in demand."



Even bashing banks over high interest rates is a two-edged sword. Bush knows that it's critical for the financial institutions to get money into the economy. But he fears that driving down rates will only wreck scores of already fragile banks. Bush must feel a bit like one of Nintendo's Super Mario Brothers: Everywhere he turns, there's another obstacle. "What's desirable in the short run is undesirable in the long run," says Urban Institute economist Rudolph G. Penner.

Mindful of the bind he's in, Bush has been urging Federal Reserve Chairman Alan Greenspan to open the money taps, and the Fed has responded with several cuts in short-term rates (charts). But long-term rates have remained high, and Greenspan fears that if the Fed loosens too much, markets may actually drive rates up.

HANDS OFF. That's why Bush has little choice but to hunker down and wait for the numbers to improve. And in the meantime, Democrats are gleefully comparing him to Herbert Hoover. Right-wingers are threatening a challenge in GOP primaries. A new BUSINESS WEEK/Harris Poll (page 32) shows that people are eager for a policy that creates new jobs, although they aren't enthralled with any of the politicians' ideas. Even the backers of a go-slow course see risks. "The substance overwhelmingly favors the do-nothing course," says Penner, "but it's really terrible politics."

Bush's political foes aren't the only ones questioning the hands-off approach. Many corporate executives will keep demanding that Bush act boldly next year. Arthur Carr, CEO of Bytex Corp., a communications-equipment manufacturer in hard-hit Massachusetts, favors a quick payroll-tax cut and an emergency jobs program: "I don't think we've had a recession where there has been so little money available."

In a few weeks, Bush will launch a public-relations campaign. He'll talk up the economy, blast obstructionist Democrats, and promote the long-term growth package he promises for January. But in his heart, Bush's fondest hope is that the economy will get moving on its own, snuffing out pressure for expensive new domestic programs and silencing his political opposition. Almost to a person, blue-chip economists think George Bush will win his gamble. But economic sages have misjudged this economy before. If they're wrong again, not just the man in 1600 Pennsylvania Ave. but all Americans could pay a fearsome price.

By Howard Gleckman and Douglas Harbrecht in Washington, with Chuck Hawkins in Atlanta, Michael Schroeder in Pittsburgh, and bureau reports

SUNUNU SPEAKS: BUSINESS S PARTLY TO BLAME

orporate leaders are giving 'self-conflicting' advice, he says

Disarray in Administration economic policy? What disarray? Despite several dizzying weeks of White House zigzags, Chief of Staff John H. Sununu says that business—not the President's beleaguered nomic team—is partly to blame for nfusion about the right response to sagging recovery. In a spirited Nov. interview with Washington Bureau ief Lee Walczak and White House rrespondent Douglas Harbrecht, nunu complained that Bush has re- ved conflicting policy advice from rporate leaders. He blasted congres- nal Democrats for sabotaging sh's economic strategy and exploit- the recession. He also insisted that President will stand by decision to hold off on a mulus package until 1992.

President Bush seemed to toe up to an anti-reces- n tax cut, only to tiptoe k again. What happened?

We never tiptoed toward it, cause we saw immediately reaction of the markets. at we were looking at was overall growth package sed on what the President already proposed.... You not get legislation passed rely by saying you want ... And it became clear t the Senate Democratic dership did not want a wth package passed.

What about the confusion er capping credit-card in- est? First the President ged such a move, then he posed legislation that would do what wanted....

There is a very important difference tween the President saying we should ve a market response to a reduction in erest rates and having someone fool- ly file a piece of legislation. That con- ains the markets. The President jaw- nes the Fed at times. Nobody passes a v that says interest rates should be ch and such.

Q *So there is no Administration disarray over economic policy?*

A The internal advice has been fairly consistent. Where [Bush] gets conflicting inputs is when he goes and talks to businessmen in different parts of the country. He talks to large business vs. small business, and the advice quite often has self-conflicting components. ... Here's what the problem is: We have to do a much better job of communicating.... We had a similar problem one year ago when people were saying that the President has to tell the American people why he wants to send troops to Saudi Arabia.... Since the economy [softened] in August, you've seen in September and October a steady drumbeat of the message of what has to be done.

SUNUNU: THE DEMOCRATS SEEM "TO BE ENJOYING" THE RECESSION

It takes time [to sink in]. Last time, we only had to convince the rest of the world. This time, we have to convince a Democratic Congress that frankly appears to be enjoying the fact that the country is in a slowdown.

Q *What do you say to executives who say they're disturbed by your apparent indecision on the economy?*

A I think they're mistaken. We have tried to deal with the things that we could handle. And you have seen us propose fast-track negotiating authority [for the U. S.-Mexico Free-Trade Agreement], banking reform legislation, the capital-gains tax cut, the R&D tax credit, and the family savings package of individual retirement accounts.

Q *Can the President just repackage these initiatives in his January State of the Union message and call that a new growth strategy?*

A That serves as the kernel of what has to be done to get this country moving. But to say that we need a totally new package just because Congress won't pass these things is wrong. We need to create a national climate where Congress feels it's imperative to pass a growth package.... What would have been worse would have been to have a [Bush] package proposed and have it fail—that would have been a confidence-buster.

Q *A new BUSINESS WEEK poll finds that most Americans do not agree with the President's call for a capital-gains tax cut. And business reaction seems to be mixed. Why not go back to the drawing board?*

A Big business is not enthusiastic about capital gains. If that's not what they want as incentives for investment, they ought to make alternative proposals. And when you ask them about it, you don't get very much except a narrow industry-by-industry response—like a credit for machine tools. Capital gains is business' second choice. The first is usually a narrow credit.

Q *At times, it seems as though Housing Secretary Jack F. Kemp is carrying on a running debate with President Bush's team of economic advisers. Who's in charge here?*

A Jack Kemp is not an economic spokesman for the Administration.

Q *Has George Bush just bet his political future on a fateful decision to forgo economic stimulus now?*

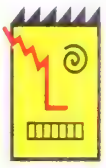
A It's not a riverboat gamble. If you talk to 100 economists, virtually all of them would say this is the best thing for the economy.

KATHERINE LAMBERT

Business Week/Harris Poll

PRESCRIPTIONS FOR A SICK ECONOMY

There's bad news and good news for George Bush in a new BUSINESS WEEK poll. Americans are opposed to a cut in capital-gains taxes. And by 57% to 39%, they want the government to stress job creation, not inflation control. Antitax sentiment runs high, with the public turning thumbs down on broad-based tax increases.



But Bush can take heart in a few findings: His go-slow strategy seems to be in tune with the feelings of many Americans, who don't want the government to take any of several recently proposed moves to jump-start growth. They also reject Democratic calls for a government-business partnership to aid U. S. competitiveness.

JOBS ARE THE THING

■ Economists believe that creating new jobs often leads to high inflation. If you had to choose, would you say the federal government should work harder to create more jobs or to keep inflation under control?

Create more jobs	57%
Keep inflation under control	39%
Not sure	4%

LOWER TAXES OR A LOWER DEFICIT?

■ The federal deficit has now risen to nearly $300 billion a year, which some argue can hurt the economy. But some economists also believe that only a tax cut for middle-income families will speed economic growth. If you had to choose, which would you favor the federal government doing—cutting taxes for middle-income families or cutting the federal deficit?

Cutting taxes for middle-income families	49%
Cutting the federal deficit	48%
Not sure	3%

A CAPITAL-GAINS CUT? THUMBS DOWN

■ President Bush wants to cut taxes on capital gains. Some argue that a cut in the capital-gains tax would spur economic growth. Others say such a tax cut only helps business and the wealthy. Do you favor or oppose a capital-gains tax cut?

Favor	37%
Oppose	54%
Not sure	9%

NAY AGAIN

■ Would you favor or oppose a cut in the capital-gains tax if it means raising other income taxes to offset losses in revenue for the federal government?

Favor	21%
Oppose	71%
Not sure	8%

WHAT WOULD YOU DO?

■ In order to spur economic growth, do think the federal government should:

	Should	Should not	Not sure
Grant tax credits for a wide variety of investments by business?	45%	49%	6%
Let companies deduct the costs of their plants and equipment more quickly?	43%	48%	9%
Increase government spending to help businesses develop new technologies, such as computer chips?	42%	56%	2%
Grant a tax credit only for research-and-development investments?	38%	56%	6%
Reduce the income tax that corporations pay?	24%	73%	3%

WORST-CASE SCENARIOS

■ If there were no other way to cut the deficit while maintaining spending on programs such as Social Security, would you be willing to see:

	Willing	Not willing	Not sure
An increase in federal income tax rates for married couples with annual incomes of $125,000 or more?	74%	25%	1%
An increase in taxes on alcohol, tobacco, and luxury items?	73%	26%	1%
An increase in the tax on imported oil?	52%	45%	3%
A national sales tax?	38%	60%	2%
An increase in everyone's federal income taxes?	33%	65%	2%
An increase in the gasoline tax?	32%	68%	0%

A CLAMOR FOR NATIONAL HEALTH INSURANCE

■ Would you favor or oppose a national health insurance plan that would pay most health care costs and that would still allow people to pick their own doctor and hospital, if it requires a 5% payroll tax, with 4% paid by employers and 1% paid by employees?

Favor	81%
Oppose	18%
Not sure	1%

FIE ON INDUSTRIAL POLICY

■ Other countries take a more active role in promoting industry and making their businesses more competitive abroad. Would you like to see the federal government take a more active role in helping specific industries or should it leave it to the free market?

Take a more active role	34%
Leave to free market	61%
Neither	2%
Not sure	3%

Edited by Mark N. Vamos and Judith H. Dobrzynski

Survey of 1,258 adults conducted Nov. 12-18, 1991, for BUSINESS WEEK by Louis Harris & Associates Inc. Results should be accurate to within 3 percentage points.

HE STREET'S FEAR: 'THE CRAZY HINGS CONGRESS MIGHT DO'

s spooked by the ill-fated credit-card cap—and a weakened Bush

For most of 1991, the stock market has racked up mighty snappy gains, based on several key assumptions: falling interest rates, a recovery in the economy, and the 1992 reelection of George Bush. Only a month , the Dow Jones industrial average an all-time high of 3077 and, until ently, was poised to raise the ceiling w. All of a sudden, those assumps don't look quite as solid to l Street. The President's ding support in public-opin- polls, his Hooveresque as- tion that the economy's K., and a feistier Democratic gress all are raising inves- anxiety.

Vall Street hasn't abandoned beliefs on which the current market is built. But the fidence in its assumptions dropped. On Nov. 15, the v suddenly fell victim to one hose infrequent but fright- ng triple-digit drubbings, pping 120 points in all, half that in the last hour. The nge raised the specter of the rific sell-offs of October, 7, and October, 1989. The v made a modest comeback next trading day, Nov. 18, lost it and then some on the n. By Nov. 20, the market steadied a bit, with the v at 2930.

D HOWLS. While many in- tors had been anticipating a back, the speed and severity he correction were shocking. ny blamed Washington, and especial- he U. S. Senate, which passed a bill t would cap interest rates on credit ds. Wall Streeters howled, and bank cks collapsed—taking the broad list stocks down with them. Credit cards one of the few businesses the ailing ks can count on for profits. They're ely needed to rebuild bank capital. at's more, in Wall Street's view, the islation was a purely political ploy t would not spur consumer spend- —and that might well hurt it, by cut- g off credit to millions.

t's little consolation to know that the asure is probably dead. "That bill whipped through the Senate in one day," notes George W. Jacobsen Jr., chief investment officer of Trevor Stewart Burton & Jacobsen Inc. "You have to be concerned about what other crazy things the Congress might do."

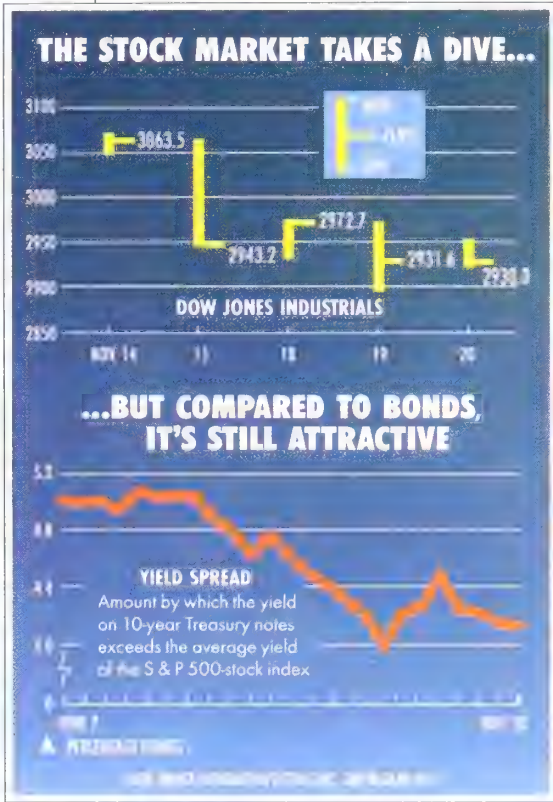
Wall Street has also railed at President Bush's seeming indifference to the market's fall. Investors don't necessarily want any additional government action, but they abhor a leadership vacuum. "Bush is woefully out of touch, and no one has faith that anyone in Washington knows what he's doing," says James F. Barksdale of Equity Investment Corp. in Atlanta.

Investors' greatest worry on the political front? That Bush's reelection may now be in peril. "People think of a Democratic Administration, and they remember the high inflation and high interest rates of the Carter years," says William LeFevre, market analyst for Tucker Anthony Inc. "What could they possibly do that's going to help the economy?" asks John Snyder, who runs the John Hancock Sovereign Investors Fund. A tax cut for middle-class taxpayers? "Given households' debt structure, they would probably use it to pay down debt, not for new spending." And an investment tax credit for corporations, he adds, would take another year to have any impact.

DOUBLE JOLT? Some investors fear that new spending programs could stimulate the economy at the same time that the Federal Reserve's aggressive easing of monetary policy, which has brought short-term interest rates to the lowest level in nearly two decades, starts to have an impact. "There's always a lag between cuts in interest rates and the time they help the economy," says Michael Schonberg, managing director of UBS Asset Management. Indeed, piling fiscal stimulus atop the monetary stimulus could reignite inflation—and send interest rates higher.

In fact, some argue that no fiscal help is needed, because profit prospects are improving. While many investors look back to the disappointments in the third quarter's earnings reports, the picture ahead looks better. Over the past month, 32% of the revisions of analysts' 1992 earnings estimates were positive, vs. just 27% the month before, according to Zacks Investment Research. Even the fourth quarter doesn't look so bad. Analysts are now looking for a 13%-to-14% gain in profits over 1990. A month ago, they were predicting a gain of around 11%.

Although investors blame Washington for the latest round of woes, there was a strong case to be made for a correction on purely technical grounds. The 13-



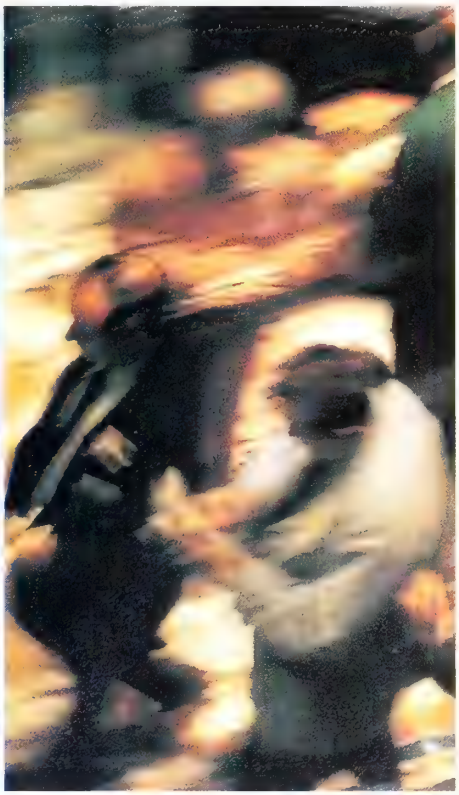


CHART BY ERIC HOFFMANN BW. PHOTOGRAPH BY KEN KERBS. DOT

the classic 10%-to-15% pullback that's part of Wall Street's ebb and flow. Even after the sell-off, the Dow had dropped only 4.8% from its high. For the year, the Dow is up 11.3%—and up 23.9% from the 1990 bear-market bottom.

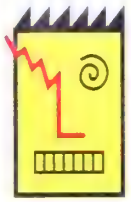
The broader indexes have been even stronger. The Standard & Poor's 500-stock index is up 14.6%, and up [illegible] from its cyclical trough. The NASDAQ Over-the-Counter Composite has climbed even higher—up 40.7% in 1991 and up 61.7% since the 1990 bottom. Included in the OTC market are most of the biotechnology stocks. On average, they were up [illegible] for the year before the correction set in. So far, the biotechs have fallen just 7.7

For the coming several weeks, the market's short-term upside potential wi be crimped by money managers who wi sell into rallies to lock up some gai before yearend. But such selling do have a salutary effect. It allows inve tors to rebuild the cash reserves th have been drained by the buying spr and by the record number of initial pu lic and secondary equity offerings.

Opportunistic money managers a

Commentary by Christopher Farrell

THE ECONOMY IS STARVING: SPOON-FEED IT INVESTMENT



Negation. Restriction. Inactivity—these are the Government's watchwords. . . . But we are not tottering to our graves. . . . There is no reason why we should not feel ourselves free to be bold, to be open, to experiment, to take action, to try the possibilities of things.

John Maynard Keynes, *Essays in Persuasion*, 1931

Keynes got it right. And this time around, only a vigorous fiscal policy can get the economy moving. The key, as Keynes stressed 60 years ago, is stimulating businesses to boost spending on new investment.

It's investment spending that lifts productivity. Workers, seeing their employers investing in the future, worry less about being laid off. Consumer spending picks up. Real wages rise, as does everyone's standard of living. And so on, in an ever-widening growth spiral. "An investment-led recovery addresses not only the short-term need to speed up the recovery; it also deals with fundamental long-term problems such as weak productivity growth and loss of U.S. competitiveness," says Lawrence Chimerine, senior adviser to DRI/McGraw-Hill.

NEEDED WORK. Obviously, moves to increase investment spending right now risk an even more mammoth federal deficit. But the price of fiscal stimulus is less than the cost of fiscal impotence. Real growth in gross national product has averaged a mere 0.5% for the past two and a half years. More worrisome is the cumulative, harmful effect of too little investment on future economic growth. Real business investment in the U.S. in the 1980s grew at an average annual rate of 3.3%, vs. 8.5% in Japan. And public spending on infrastructure fell from 2.3% of GNP two decades ago to 1.3% in the 1980s.

Back in the early 1930s, orthodox economic thinkers believed if President Herbert Hoover sat tight and waited, the economy's natural forces would bring about recovery. Treasury Secretary Andrew W. Mellon, for one, was a "passionate advocate of inaction," in economist John K. Galbraith's view.

The experts agreed that all government had to do to restore business confidence was balance the budget. But that bleak decade showed how an economy can crawl along for years, trapped in high joblessness and low growth.

What can Washington do now? For starters, the federal government should restore an investment tax credit. Chimerine proposes a hefty 20% to 25% credit on new investment. To limit the Treasury's loss of revenue while encouraging new investment, the cred it would be allowed only for increme tal investments in productivity-enhanc ing equipment above a company' recent investment-spending pattern.

The government could also embar on an ambitious public-investment pro ect. The work needs to be done any way: Roads, harbors, sewage systems communication links, and other eco nomic building blocks are crumbling And these public investments can bo ster private returns by easing the dis tribution of goods and services. U.S productivity growth fell from an aver age annual rate of 2.8% between 195 and 1969, to 1.4% a year between 197 and 1987. Almost 60% of that drop can be tie to lower public investment estimates David A. As chauer, an economist a Bates College.

INFLATION LID. But, you ask what about the yawning fed eral-budget gap? That might b narrowed some by earmark ing the multiyear "peace div idend" to pay for nonmilitary public investment. And rev losses from the investmen tax credit should be minimal, too, a higher equipment spending restore confidence and incomes, and eventuall yields higher tax receipts. And wha about inflation? Consumer prices ar up a mere 2.8% over the past months even as the budget defici soars. Fierce global competition fo market share and widespread corpo rate makeovers have been keeping tight lid on inflationary pressures.

Every policy initiative entails risks But bringing back the investment-ori ented economics of John Maynar Keynes offers policymakers a solutio to a short-term problem with long-term benefits to U.S. competitiveness.

king the most of the decline. Schonrg of UBS, who thinks the economy ll grow at a peppy 4% rate next year, s been buying such cyclical stocks as coa, Digital Equipment, and USX, ich have been hit hard of late. Trevor ewart's Jacobsen, on the other hand, is rgain-hunting for food, tobacco, beverge, and consumer-products growth cks. Warren Shaw, who oversees $6 lion in equity investments at Chancel- Capital Management Inc., says he will also buy growth stocks if the market drops to the mid-2800s.

That should be the bottom of any correction—the point from which the Dow has bounced back several times before. But that, too, is predicated on interest rates' staying low, or going even lower. Returns on U. S. Treasury bills, money-market funds, and certificates of deposit are so low that the relatively paltry 3.1% yield on the S&P 500 doesn't look so bad. And next to longer-term investments such as 10-year U. S. Treasury bonds, the yield gap is the narrowest it has been in months (charts, page 33).

That bodes well for stocks. And given the forces already at work in the economy, many market-watchers think rates and inflation will remain friendly to equity investors. And, yes, they even think the economy will eventually come along—unless Congress or the President steps in and tries to "help."

By Jeffrey M. Laderman in New York

Commentary/by Michael J. Mandel

THE ECONOMY IS GAINING STRENGTH: LET IT BE

Is it time for government to push the panic button and give the economy a jolt of fiscal stimulus?

Not yet. The odds that the U. S. will slip back into recession are low: Falling interest rates, lower inflaon, and rising exports should keep ie recovery going. What's more, the . S. is making the long-awaited switch rom a consumer-oriented economy to ie driven by investment and exports. hat change, crucial for U. S. competiveness, could be aborted if panicky olliticians pump up consumption to get ie economy going again.

No question, the next six months or o could be uncomfortable. Ruing last ummer's optimism, most forecasters ow see slow growth at best through ext spring. Unemployment, now at 8%, may not fall until well into 1992. o it's understandable why Presient Bush and other incuments may get edgy as they ok forward to next Novemer's election.

PRING THAW. Still, there's litle evidence that the economy actually contracting. Industrial production and employment re running flat—but they're not dropng. And the banks seem to be slowly ending. "The economy is not exhibitng any of the cumulative unwinding" hat would signal a renewed downturn, ays Stephen S. Roach, senior econoist at Morgan Stanley & Co.

Indeed, the Federal Reserve's campaign to cut short-term interest rates is nally showing results. The money upply is growing again, indicating hat borrowers are having an easier me of it. Domestic nonfinancial debt, xcept for federal borrowing, rose at a 6% annual rate in September, its biggest gain since June, 1990. And Octoer housing starts jumped by 7.3%, to heir highest level in nearly a year.

The Fed likely has done enough to keep the recovery rolling. Typically, lower rates take six months or more to boost the economy. In other words, the full stimulus from the Fed's last cut in interest rates, on Nov. 6, won't register until spring. "Monetary policy has done enough to facilitate the expansion," says Mickey Levy, chief economist at CRT Government Securities Ltd.

Long-term interest rates should drop, too, as inflation continues to subside. With the core rate of inflation now heading below 4%, the interest rate on 30-year Treasury bonds could drop as far as 6%, from the current 7.9%. A rate that low would surely start filling order books for such long-term investments as capital equipment.

There's also good news on trade. Exports are up 10% over last year. They should keep rising in 1992 as the global economy expands and demand builds. Combined with lower interest rates, that augurs more confidence among U. S. consumers and businesses.

In the short run, none of this is likely to relieve pressure on Washington to do something, anything, to get the economy growing again. But an attempt to boost consumer demand with tax cuts or some other federal program would be a bad mistake: It could reignite the inflation that has been painfully squeezed out of the economy. Even partial victories for price stability should not be given up so easily.

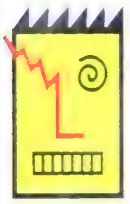
SKEWED PERCEPTIONS. Encouraging consumption would surely accelerate the recovery. But it could depress the U. S. economy's competitiveness. As many economists and executives have advocated, the U. S. is becoming more like Japan and Germany by emphasizing investment over consumption. In the past four years, business investment, minus commercial real estate, has accounted for a steadily rising part of the economy. Thanks largely to spending on computers, investment now constitutes 11.5% of gross national product. That's the biggest share in decades.

But if Washington were to encourage a consumer-led recovery, all these gains could be undone. Business investment and exports would compete for credit against housing, autos, and consumer imports. The U. S. could again be stuck in that '80s nightmare: Borrowing hugely from abroad to finance monster trade deficits.

Curiously, this may be one time when paralysis in Washington works in favor of sound economic policy. The U. S. has paid the price for low inflation and lower interest rates. Now, it's time to sit back and see the benefits come home.

BABY, IT'S COLD INSIDE

The economic chill has retailers shivering as Christmas nears



In the tiny hamlet of Dodgeville, Wis., Richard C. Anderson assembled several hundred telephone operators, order-takers, and packers at Lands' End Inc. headquarters for a few last words before the start of the holiday selling season. The $604 million catalog company, whose earnings plunged 49% after a disastrous inventory shortfall last Christmas, had just reported a dramatic improvement in its third-quarter earnings.

So the retailer's CEO trotted out his most inspiring pep talk, right? Not exactly. "There's a triple whammy we should keep in mind: the short selling season, the constant threat of recession, and a debt-ridden consumer," he warned, adding that over half the company's yearly profits were likely to come from sales in November, December, and January. "It's anybody's guess what this Christmas will bring."

Retailers aren't the only ones anxiously awaiting the arrival of St. Nick. Manufacturers, economists, and politicians are all looking for signs that consumers are spending again. Catalog and store sales account for nearly a quarter of gross national product, so consumer holiday spending should help indicate when the economy will perk up. The reading so far on consumer spending? "Gone south," says John J. Schultz, head of the National Retail Federation and former president of B. Altman & Co.

REASON TO FRET. That's no exaggeration. According to the Conference Board's latest monthly survey of 5,000 households, consumer confidence is approaching the lows of the early 1980s. And worried shoppers don't spend much. A poll of 450 households taken in November by Leo J. Shapiro & Associates, a Chicago market-research firm, found that 53% of consumers planned to spend less on gifts this year than last. In 1990, only 46% had said that.

Considering last year's calamitous Christmas, there's reason to fret. In 1990, holiday sales rose just 1% after inflation, according to Carl Steidtmann,

THE SCENT OF A SALE: ON THE FRIDAY FOLLOW

chief economist for Price Waterhouse's Management Horizons unit, a retail consultancy. This year could look a little better: Steidtmann predicts that general merchandise sales will rise 4%, including 2% inflation, in the fourth quarter. "A difficult year is an improvement over a disaster," he says.

What's different this year is that many retailers are keeping inventories lean. Child World Inc. lost $192 million in 1990 and barely escaped bankruptcy after selling a huge inventory of out-of-date toys at fire-sale prices. A new CEO, former Toys 'R' Us Inc. executive [illegible] John Devine, isn't stockpiling this year. Others won't get the chance to learn

GOODIES TO WARM UP A CHILLY CHRISTMAS

Every Christmas, retailers count on a handful of must-have items to draw shoppers into the store. Here's a sampler of what retailers are hoping will put even the most reluctant shoppers in a spending mood

▲ **SHELL GAME** The Technodrome is the dou[ble]decker mobile fortress that guards Shredde[r], archenemy of the Teenage Mutant Ninja Tu[rtles]

◀ **SELECTED SHORTS** The Gap's brightly patterned boxer shorts are aimed at homebound yuppies who want to do their vegetating with a sense of style

GIVING, SEARS SHOPPERS WILL FIND BARGAINS—FROM CAMCORDERS TO SWEATERS

om last year's mistakes: According to
in & Bradstreet Corp., retail bank-
ptcies were up 33% in the first seven
onths of 1991.

The stores that are left are stalking a
w breed of shopper. "We've taught
e customer to buy on sale," explains
dy Jordan, a Minneapolis retail consul-
nt. No wonder, then, that this season
ll be filled with special promotions.

Take Hartmarx Specialty Stores Inc.
espite a major restructuring amid
epening losses, the operator of 213
ores in 30 states produced and mailed
video Christmas catalog to 150,000 of
best customers in early November, at
cost of nearly $1 million. The 12-min-
ute piece took nine months to produce and involved 24 actors, a mansion in the Chicago suburb of Lake Forest, and an original musical score.

BOOK VALUE. Sears, Roebuck & Co., for its part, is counting on a small, homesick alien to draw shoppers into its 868 stores. On Thanksgiving night, Sears will be the sole national sponsor of the network-television premiere of *E. T.* The next day, Sears plans to wow shoppers with ultralow prices on key items ranging from camcorders to sweaters. "We've had to pack more value into our merchandise," declares Matthew A. Howard, Sears' senior vice-president for marketing.

Some megapromotions entail considerable risk. Ed Erickson, senior book buyer for Target Stores, the discount department-store chain owned by Dayton Hudson Corp. in Minneapolis, says he bought as many *Random House Children's Encyclopedias* as all other booksellers combined. Erickson expects that at $29, down from a regular retail price of $60, the one-volume book will generate $1 million in additional sales for his department. But if parents don't buy, Target will be stuck: To win a favorable price, it waived the right to return extras to the publisher.

Judging by the goods that many retailers are pushing heavily, this is a good year for stay-at-homes. Nordstrom Inc.'s flagship store in downtown Seattle features street-level displays of stacks and stacks of men's cotton and flannel pajamas. Disney's *Fantasia* video, selling for as little as $15, has been flying off the shelves. And the castle of the Teenage Mutant Ninja Turtles' arch-enemy, Shredder, is on the top of many kids' wish lists.

But buying frenzies are just a relic of the 1980s. Listen to Susan D. Hester, who recently spent a snowy Saturday morning at Denver's huge Cherry Creek shopping mall. "If I want something, I can hit the sales in January," she says. "It's going to be a consumers' market." That's a common attitude. No wonder retailers think this is the season to be worried.

By Julia Flynn Siler in Chicago, with Sandra Atchison in Denver, Geoff Smith in Boston, and bureau reports

▼ NO MUSS, NO FUSS Screwpull is a Teflon corkscrew intended for oenophiles with two left thumbs. The gift set includes a high-tech foil cutter

◀ CLASSIC MICKEY *Fantasia* is back, and for a limited time only, according to Disney. A cartoon introduction to longhair music

▲ SO LIFELIKE This year's surprise hit, the Waterbabies Doll, is on many a most-wanted list. Fill it with warm water, and its "skin" is supposed to feel like a real baby's

(CLOCKWISE FROM TOP) PHOTOGRAPHS BY LOUIS MILNER, STEVE WINTER BLACK STAR, DAVID FERRIS (2), STEVE WINTER BLACK STAR, DAVID FERRIS

TRADE

AT IBM: BIG BLUE HAS THREATENED TO MOVE ITS PRODUCTION OFFSHORE

DID WASHINGTON LOSE SIGHT OF THE BIG PICTURE?

The tariff on liquid-crystal displays has U.S. laptop makers up in arms

In theory, hitting a foreign supplier with antidumping duties is one of the most potent weapons in the U.S. government's trade arsenal. But a Commerce Dept. decision to slap a 62% duty on imports of the latest laptop-computer screens from Japan has sent Silicon Valley into a funk. Now, even the agency is dissatisfied with the outcome. "We're not happy with it," admits Commerce Secretary Robert A. Mosbacher. "But we are constrained to follow the laws as they are written."

No wonder he's unhappy. Since Commerce assessed the penalty on imports of "active matrix" screens, but not on finished laptops that contain the technology, computer makers have been rushing offshore with their laptop production. The protection afforded the display makers is "a completely hollow victory," says Jerry K. Pearlman, chairman of Zenith Electronics Corp., the largest maker of non-LCD computer screens in the U.S.

Toshiba Corp. bailed out first, announcing in September that it would begin importing its most sophisticated laptops from Japan instead of making them in its Irvine (Calif.) plant. Apple Computer Inc. was next, abandoning plans to manufacture its month-old notebook computers in its Fountain (Colo.) factory and opting instead to do the job in Cork, Ireland. And this month, even IBM's normally diplomatic chairman, John F. Akers, blasted the policy in a Tokyo speech and threatened to set up Big Blue's laptop production overseas.

STEAMED. The reaction is so strong because the screens are so important. While active-matrix production is just getting off the ground—1990 sales of the screens were just $250 million worldwide—demand for the displays is expected to top $1 billion in 1994 (chart). The technology offers a dramatic clarity improvement over current LCDs, making high-quality color a reality for tiny products such as notebook computers. Already, active-matrix screens are a critical component in other consumer electronics items, including camcorders. Eventually, they'll be used in everything from medical instruments to high-definition TVs to auto dashboards.

That's one reason Commerce sought to shelter the nascent domestic LCD business. "It's absolutely essential for the U.S. to have some flat-panel display manufacturing," says Ia Ross, chairman of the National Advisor Committee on Semiconductors. And ev eryone agrees that Japanese LCD maker have been aggressive—if not preda tory—in active-matrix screen pricing "All the statute does is ask manufactu ers to price their products based on the costs," says Curtis Stevens, chief finan cial officer of Planar Systems Inc., screen maker that had asked Commerc to act on the issue. He says Japanes suppliers of the screens are selling ther to U.S. customers for less than half what it costs to make them.

The screens are by far the most ex pensive component in a laptop computer accounting for up to 50% of the ma chine's manufacturing cost. That make the new Commerce duty a stiff one: IB estimates the penalty could run $600 fo every computer manufactured at its Ra leigh (N.C.) laptop plant. Avoiding th duty isn't cheap, either. "We just length ened our pipeline by 12,000 miles," say James M. Burger, Apple's director government law, of the company's ma ufacturing move to Ireland. "We jus didn't need this."

What really steams computer makers though, is that the Commerce decisio probably comes too late to help th struggling U.S. screen industry. That because the Japanese are already wa ahead. Sharp Corp., the market leade has spent more than $1 billion on LC technology and plans to invest $650 mi lion more, mostly in active-matri screens, during the next four years.

'STARTING FROM ZERO.' While Sharp an other Japanese companies were pumpin money into LCD technology, U.S. compa nies, including General Electric, IBM, an Exxon, were scuttling their display ope ations. By 1989, most major domesti players had left the field. Now, the larg est U.S. maker of active-matrix LCDs OIS Optical Imaging Systems Inc. Troy, Mich., doesn't even have the capac ity to sell commercially—most of it screens are sold to the Pentagon.

Bringing U.S. production up to com mercial levels is a daunting challenge Most experts believe a $200 million in vestment is the minimum needed to set up a com mercial manufacturing op eration, although other maintain that the cos could be $1 billion. Ther are other problems. Th screens are so difficult t manufacture that som 80% coming off the pro duction line must b junked because of som flaw. Then there's th matter of patents

Japanese own most of the product- research that's been done in active- rix technology. "The problem, in the of the U. S., would be having to ılder both basic research expenses capital spending to build a produc- facility," says Masahiro Kosaka, di- or of Matsushita Electric Industrial s display technlogy research lab. "It y would be starting from zero." or now, most of the U. S. computer stry is clearly unwilling to start ı scratch. Although Xerox Corp. is working to produce active-matrix LCDs, IBM's strategy is more common. Instead of setting up LCD development here, Big Blue has put nearly $100 million into a joint development agreement with Toshiba to build screens in Japan. "The reality is that the core of competency in this market is in Japan," says James A. Cannavino, the general manager of IBM's personal computer division. "If the U. S. wanted to be in this market, action should have been taken 10 years ago."

Since he can't rewrite history, Mosbacher is trying to negotiate a settlement with computer makers. Last month, he called the chief executives at Apple, IBM, and others and urged them to refrain from moving production overseas. "When this is finished, I want to be convinced we helped build the screen industry or at least did not push the computer industry offshore," Mosbacher says. So far, though, the computer makers aren't cutting any deals.

By Paul Magnusson in Washington, with bureau reports

GS

HIS PILL COULD REDUCE HE CHANCE OF A HEART ATTACK

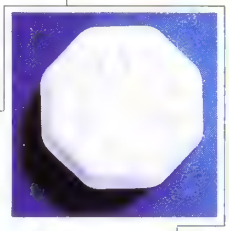
the news about Merck's anticholesterol drug, its stock takes wing

he anticholesterol drug Mevacor was already generating nearly $1 billion in sales annually for Merck o. Then came word of a study that gests strongly that the drug can a leading cause of heart attacks. drug packs such a punch against fatty arterial deposits known as ue that the scientists conducting the y announced on Nov. 20 that they canceled plans to extend their re- ch for another year and a half.

ıe study, conducted for Merck by University of Southern fornia, won't be published next year, but early l of the findings is expect- o convince even skeptical sicians that the drug is h using. While physicians ıe about the value of re- ng high cholesterol levels, y heart specialists are that halting the accumu- n of plaque will go far to ı heart disease. "For car- ogists, this is the type of ence that means a great ," says Dr. Basil M. Rif- , a physician with the Na- al Heart, Lung & Blood itute. One Denver cardiol- t, Dr. Lester Lockspeiser, s that this work, if it holds n scientific reviews, "may go a long " toward changing the minds of hes- general practitioners.

ıe good news comes just when ck—and a shaky stock market— ded some. Growth in new prescrip- s of Mevacor has flattened over the six months, settling into a range of e 220,000 to 230,000 in new patient criptions per month in the U. S., ac- ing to independent industry analyst ıant K. Shah. What's more, Bristol-Myers Squibb Co. recently rolled out a competing medication, Pravachol, which should cut into Mevacor's market. "This is going to give Merck another boost," says Shah. Merck did no more than confirm that the study had been halted. That was enough for investors: Merck stock shot to 145, up 6⅛, on Nov. 20.

The growth potential for Mevacor is huge. Only about 3 million of an estimated 10 million to 21 million Americans with worrisome cholesterol levels are taking some kind of medication, Merck officials say. And many are taking drugs that come in an inconvenient form or have harsh side effects (table). Even with its $500 to $700 annual price tag and the lifetime commitment to daily use patients must make, Mevacor is becoming a favorite. Unlike some competing medicines that require mixing a powder into water or other liquid, Mevacor pills are "easy to take," says Dr. Daniel Steinberg, a University of California at San Diego physician who monitored the new study.



MEVACOR AT A GLANCE

GENERIC NAME: Lovastatin

COST: $500 to $700 yearly for once-a-day use

USUAL DOSAGE: 20 mg

PURPOSE: Cholesterol reduction, but a new study suggests that it can help prevent heart attacks

SALES: Nearly $1 billion annually

PLUSES: Few side effects, compared with the bloating, flushing, and gastrointestinal distress common to rival drugs

PROBLEMS: Pravachol, new from Bristol-Myers Squibb, has just begun competing head to head. And Merck may compete against itself with Zocor, due out soon

DATA: COMPANY REPORTS, BW

The USC research is the first to show that a single drug can halt the buildup of plaque. And in a small share of users, it can actually shrink fatty deposits. Earlier studies, including one in 1987 by Dr. David H. Blankenhorn, leader of the USC team, have used two or more drugs in combination, along with diet changes. One such project, conducted last year by Dr. B. Greg Brown of the University of Washington, paired Mevacor with colestipol, a powdered drug, or with niacin, a vitamin. All the studies concluded that reducing cholesterol can halt or reverse plaque build-up.

VEGGIE DIET. In the new study, patients took four times the normal dose of Mevacor. Results were so good after two years of testing on more than 240 patients that Steinberg's monitoring committee concluded it was no longer ethical to continue giving placebos to some high-risk patients. "It was clear that the drug is beneficial," says Steinberg.

Not all experts are thrilled about the preliminary results. Some say that most of the estimated 50 million Americans who should mind their cholesterol would be better off reducing the fat in their diets. Says Dr. Edwin L. Bierman, a medical professor and expert on atherosclerosis at the University of Washington: "The first line of treatment is not everybody taking a drug for life, but going to a low saturated-fat diet." He points to a recent study that shows that people can fight arterial plaque simply by switching to a nearly all-vegetarian diet.

For Merck, however, the results are likely to be powerful medicine. The study, once it's reviewed by experts and published, would bolster a claim that Mevacor can help prevent heart attacks. That would put sales back on the fast track—and keep Merck among the healthiest players in the drug industry.

By Joseph Weber in Philadelphia

AIRLINES

MIDWAY EMPLOYEES DEMONSTRATE OUTSIDE THE FEDERAL BUILDING IN CHICAGO

ALMOST EVERYBODY IS MAD AT NORTHWEST AIRLINES

After the botched Midway deal come questions about the line's finances

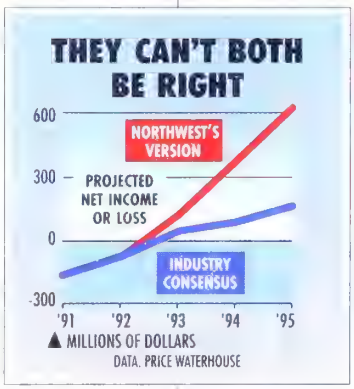
Talk about a screwup.

On Oct. 8, when Northwest Airlines boldly outbid Southwest Airlines to win control of bankrupt Midway Airlines, it looked as though Al Checchi, Northwest's dealmaking chairman, had scored a coup. Not only had he gained access to Midway's 21 gates at Chicago's convenient Midway airport, but he had also outflanked Southwest, a tough potential competitor.

Now, though, Midway Airlines Inc. is grounded for lack of cash, the carriers are headed for a court battle, and Northwest Airlines Inc. has plenty of egg on its face. Worse yet, a new Price Waterhouse study, prepared for a Minnesota agency that is getting ready to lend Northwest $320 million, suggests that the airline is under financial pressure.

FALSE DATA? Northwest Co-chairman Gary Wilson insists the airline is on firm financial ground. But the study casts doubt on whether Checchi has the resources to attempt a much-talked-about merger with Continental Airlines Inc. Indeed, Checchi's best hope these days may be a merger between British Airways PLC and KLM Royal Dutch Airlines, which controls 20% of Northwest's common equity. BA and KLM won't discuss their plans, but KLM's unions have insisted such a deal is under way. If so, Northwest might get access to BA's deep pockets. And traffic fed from BA's transatlantic service could help fill Northwest's U. S. flights.

Northwest walked away from the Midway deal on Nov. 13, charging that Midway had given false revenue data to the Transportation Dept.—data Northwest used to prepare its bid. Midway's own books, Northwest contends, show that Midway had overstated operating results by $35 million. Midway's denial of the charges gained support when Robin A. Caldwell, director of Transportation's Office of Airline Statistics, rechecked Midway's data. Says Caldwell: "We have no factual evidence Midway's data is anything but accurate." Midway has sued Northwest for fraud. Northwest vows to countersue.



Northwest may simply have been looking to save face. Wilson says the deal "didn't make sense, no matter what our financial position." But with Midway losing more than $600,000 a day, Northwest probably never could have afforded the $174 million deal. The Price Waterhouse study, prepared for the Minneapolis-St. Paul Metropolitan Airports Commission, says Northwest will end 19 with just $31 million in cash. As of m year, cash flow barely covered intere and aircraft rentals.

Northwest's condition may be wor than it has been willing to admit. Wh the carrier's internal projections sh plenty of money to cover its $4.2 billi in total long-term debt, Price Wate house casts doubt on those numbe (chart). Adjusting the Northwest data reflect revenue-growth projections su plied by industry analysts, Price Wate house figures Northwest will genera $1.2 billion less in cash than it projec leaving it hard-pressed to cover some its obligations. Northwest responds th it has an untapped $600 million line credit to provide liquidity and could c capital spending or sell receivables generate more cash if needed.

The bottom line: Northwest isn't g ing under, but its dealmaking ability constrained. "They can make target investments that don't require a lot cash," says a person involved in the r port. It doesn't help that Northwest e pects a $253 million loss in 1991 on top last year's $302 million loss.

ANGRY AGENCY. Given his financial tro bles, Checchi hardly needed the Midw debacle. Northwest has been vilified Chicago by Mayor Richard M. Daley a at rallies by angry Midway employee Transportation is mad that Northwe pulled out of the Midway deal witho first informing Secretary Samuel Skinner. Says one official at the agenc "We read about it in the newspape Since Checchi is trying to persuade Sk ner to give Northwest, and not Delta A Lines Inc., authority to fly from Detr to London, angering Transportation w hardly a cagey move.

For now, Checchi first priority has to the deal with Minne ta. In return for Nort west building big ma tenance facilities Hibbing and Dulut Checchi hopes the sta will come through wi $835 million in finan ing, including a $3 million loan to help p down acquisition debt

Midway, howeve puts even that in jeopardy. All the b publicity, coupled with the Price Wate house report, is making Minnesotans u easy. Still, State Senator Donald Fran among others, thinks the package w pass. But Checchi may someday wish never tried to buy Midway Airlines.

By Kevin Kelly in Chicago, with Se Payne in Washington and Wendy Zellne in Dallas

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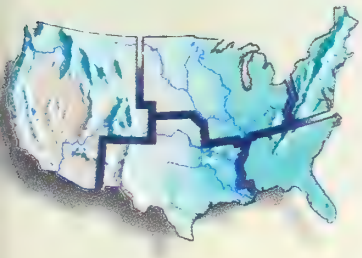

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'LIGHTS, CAMERA... O.K., BYTE-BRAIN, DO YOUR STUFF'

The star of *Beauty and the Beast* and *Black or White:* Computer graphics

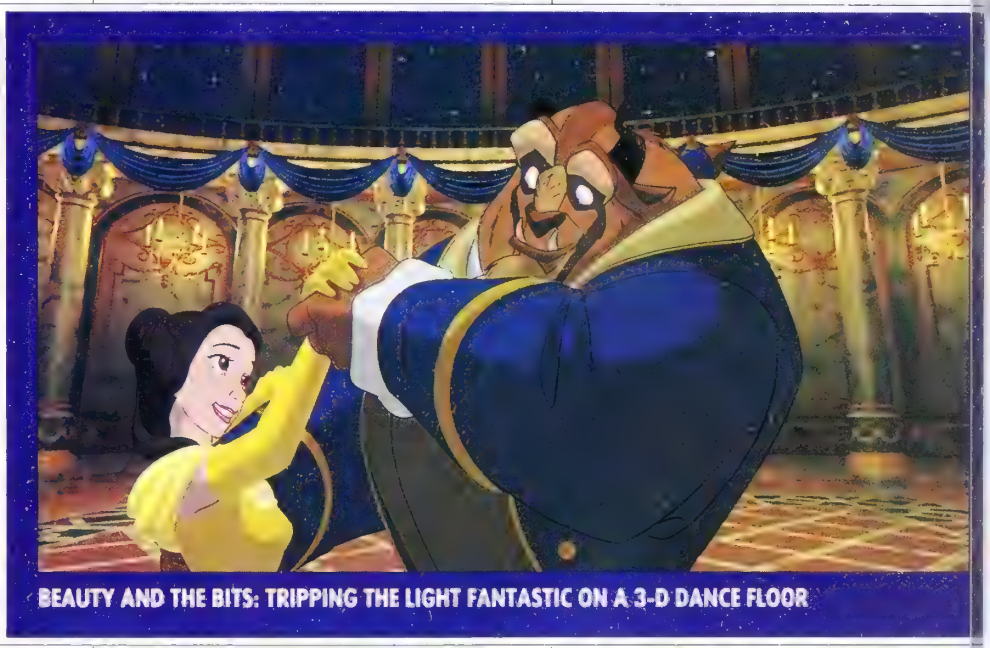
There's a point about midway through the new animated film *Beauty and the Beast* where the Beast takes Beauty's arm and guides her into his castle's ballroom. The doors open, the audience gasps, and the two stroll in, dance, and fall in love. The mood and atmosphere needed to be just right. To get it, Walt Disney Co. turned not to its army of talented animators but to a cluster of computers arrayed in a single room in Glendale, Calif.

The staggering scene—a glittering ballroom that soars 72 feet to a painted ceiling with gilt cherubs—is the first fully computer-generated, three-dimensional setting in a Disney animated feature. It is but the latest example of the march on Hollywood by the techno-nerds, whose computers are quickly moving into the mainstream of entertainment. Working out of studios from Hollywood to Silicon Valley, these graphic artists are using computer-generated images to make their mark on feature films, snazzy television commercials, and music videos such as Michael Jackson's new *Black or White*.

LOSING FACE. They work their magic in different ways. Disney artists used the computer to draw a 3-D ballroom, complete with a twinkling chandelier. Then the directors were able to fly an imaginary "camera" around the digitized image as if it were a live-action film. That lends photo-realism and a more dramatic sense of movement. Once the computer's camera recorded the entire scene, the characters of Beauty and the Beast, which were drawn and colored by hand, were placed in the ballroom electronically.

In contrast, most of the special effects in the new Michael Jackson video started with traditional live-action video snippets. Then, using a series of complex calculations in a technique known as "morphing," a computer combined and contorted the images. A series of flashing faces, gracefully blending into one another, became the most striking sequence in *Black or White*.

Until recently, most of these effects weren't practical because of the high cost of powerful computers. Now, desktop workstations costing less than $15,000 can do much of the graphics work once done by million-dollar supercomputers. At the same time, software has improved dramatically. Three years ago, producing special effects on a computer cost as much as eight times what it cost using traditional techniques, such as shooting footage of scale models, says John Dykstra, creative director at Apogee Productions Inc. Apogee produced the special effects in *Black or White*. But now, Dykstra says, the cost is only 50% more. And some effects, such as morphing, can't be done well without computers.



BEAUTY AND THE BITS: TRIPPING THE LIGHT FANTASTIC ON A 3-D DANCE FLOOR

When it comes to Disney-style animation, artists can now create animation even more cheaply with computers than by hand. For years, Disney has used computers to automate repetitious and routine drawing and coloring, such as stamping out the hundreds of plates, forks, and goblets for one of *Beauty and the Beast*'s musical numbers. But paint and brush are no match for computers in creating 3-D settings and other tough jobs.

Computers have been auditioning for bit parts in films for nearly two decades. Some of the more primitive attempts, however, yielded animated characters that were emotionless next to hand-drawn animation. And sometimes, the cutting between live-action footage and computer graphics was too visually jarring, as in 1984's *The Last Starfighter* from Lorimar Telepictures Corp.

OFF-KEY TOONS. But the success of last summer's *Terminator 2* unleashed a rush to new technology. In that case, Industrial Light & Magic, part of director George Lucas' LucasArts Entertainment Co., gave the film a character that could turn itself into an animated mercury-metal man as it tried to terminate Arnold Schwarzenegger. In the coming months, *Hook, Memoirs of an Invisible Man*, and *Batman Returns* are among the titles that will show off computer-generated sequences.

No one expects computers to completely replace hand-drawn animation other conventional techniques any time soon. "Unless there's an animator behind the computer," says Dan Philips, manager of Disney's computer-generated imagery department, "you're going to end up with what the machine thinks is correct, and that's bad animation."

Disney, in fact, has yet to debut an actual computer-animated character in a feature film. But that will change. Next fall, the company is set to begin work on the world's first fully computer-animated feature. The as-yet-untitled work is being produced for Disney by Pixar, a Silicon Valley outfit that won an Academy Award in 1989 for the best animated short film. Perhaps one day soon, a teary-screened computer, thanking its parents, will take home an Oscar.

By Larry Armstrong in Los Angeles with Evan I. Schwartz in New York

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In Business This Week

EDITED BY HARRIS COLLINGWOOD

WANDERING WINGTIPS

According to a survey commissioned by Las Colinas, a planned community near Dallas, officials at 62% of 340 large companies plan to relocate within five years. Moreover, 19% of those surveyed might leave the U.S. Here are the top reasons for moving

DATA 1991 LAS COLINAS CORPORATE RELOCATION SURVEY

IBM RAISES THE AX AGAIN

▶ Since its 1986 peak of 406,000, IBM's payroll has shrunk by almost 60,000, as many employees have opted for lucrative early-retirement plans and other incentives offered by the beleaguered computer giant. But IBM seems determined to slash costs even more. It's expected in early December to reveal plans for cutting as many as 20,000 more people in 1992.

Big Blue's intent is to do more with less. Wall Street reckons IBM's 1991 revenues will be down 5.5% from last year, generating earnings per share of only about 18¢, versus $10.50 in 1990. But the new cuts, if they materialize, might cut costs by $1 billion a year. But iffy demand for mainframes still clouds the outlook for 1992.

HOW BIG WILL MICROSOFT GET?

▶ Will Microsoft monopolize? The No. 1 maker of personal-computer software says recent news reports claiming that it plans to capture at least 70% of the market for major applications software are off base.

Such a feat may be desirable, but it's not realistic, says Microsoft Senior Vice-President Michael Maples. At present, Microsoft has no more than 33% of any category of applications for IBM and compatible machines, including spreadsheets, word processors, and graphics.

The question of whether it will totally dominate PC applications software is more than academic: The Federal Trade Commission is studying whether Microsoft's monopoly in operating systems gives it an unfair advantage in applications.

SOME NEW BLOCKS FOR BLOCKBUSTER

▶ There's another linkup in the entertainment business. Philips Electronics has agreed to invest $66 million in Blockbuster Entertainment, either through a joint venture or simply by purchasing Blockbuster stock.

The affiliation is Blockbuster's first venture outside its video rental business. Blockbuster will promote Philips' recently introduced Compact Disc Interactive systems in its 1,934 stores. CDI combines video, audio, text, and graphics for games and educational programs and eventually movies. Such multimedia products should give Blockbuster a shot at new sources of revenue as its core video-rental business matures.

HOW ABOUT 3,500 TOASTERS?

Think of it as a toaster with courtesy lights. The Bank of Bloomfield Hills, Mich., is offering a 1992 Cadillac Seville to customers who buy a $250,000, 30-month certificate of deposit.

You can also think of it as an investment with drawbacks. At most, the Caddy is the rough equivalent of a 6.64% annual yield on a CD. When you take the car, the bank has to report the Seville's sticker price—$35,575—to the IRS as interest paid all in one year. That's why one potential investor is waiting until 1992, says David Provost, president of the bank.

Maybe the CD buyer should delay permanently. "Whenever we've analyzed these situations, the consumer always loses," warns Martin Bradshaw, publisher of *RateFax*, a comparison of CD yields. Bradshaw recommends spreading the $250,000 around into CDs from several banks. What a killjoy, huh? But then, he drives a Mercedes diesel.

MAXWELL'S HEIRS FACE LEGAL SNARLS

▶ The late British media tycoon Robert Maxwell may have bequeathed his heirs some nasty legal trouble, along with debts exceeding $4 billion. Britain's Serious Fraud Office is investigating a complaint by Swiss Bank Corp. concerning a loan agreement Maxwell made just weeks before his death.

The dispute concerns the collateral that a private Maxwell company pledged in return for a $98 million loan from SBC. The bank says the company promised one set of securities but delivered an entirely different and less valuable portfolio.

If SBC's charges hold up, the bank could theoretically force the private Maxwell company into bankruptcy, triggering a collapse of the whole empire. But an SBC banker says that's only a "last resort."

THE NETWORKS ARE STARTING TO HOWL

▶ The Big Three TV networks have groused about government regulation for years. In case no one paid attention, the complaints are getting louder. NBC has issued a 67-page report warning that the broadcast industry will be crippled unless the Feds give it relief. In the report, Richard Cotton, NBC's general counsel, tells the Federal Communications Commission that the Big Three are losing viewers and profits at an alarming clip. On the nets' wish list: a bigger cut of the syndication market and the right to own local cable systems.

New technology can seem a little intimidating.

Investments in information technology have reached 40% of U.S. capital spending. Yet national productivity has not improved since 1973.

So anxiety over new spending is justifiable, even healthy. The evidence is that hardware alone doesn't pay off. Which is why Andersen Consulting offers something even more powerful.

A way for your organization to seamlessly link technology to your strategies, operations and human resources.

This is a balanced, realistic approach that puts fear where it belongs. In your competition.

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Where we go from here.℠

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LEARNING THE ROPES

A Step-By-Step Guide To The Intelligent Choice In Employee Benefits. The Guardian.

You can get on top of the best employee benefit plans in three easy steps. First, you need the right insurer. One with experienced group insurance professionals who can show you benefit solutions that work for your business as well as your employees.

Second, get hold of the facts about The Guardian.

You'll discover The Guardian has a well-earned reputation for flexible plan design, quick claim service, and financial strength and stability. In fact, we're one of only a handful of life insurance companies that have earned both Standard & Poor's and Moody's Triple-A ratings, as well as an A+ from A.M. Best. So we'll be around with products and services to support you and your employees in the years to come—just as we have for the past 131 years.

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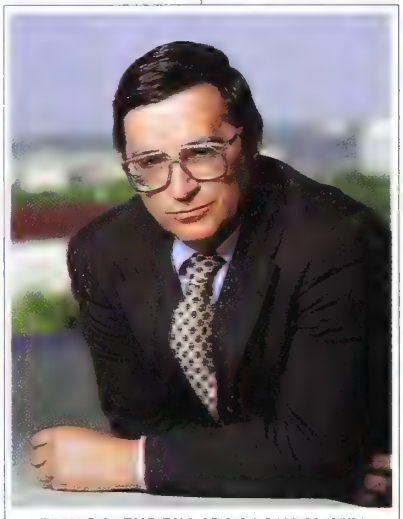
EDITED BY STEPHEN H. WILDSTROM

VILL CONGRESS SKIP TOWN VITHOUT BAILING OUT THE BAILOUTS?

ll through this year, Congress and the Bush Administration have agreed on one thing: Washington has to restore confidence in the nation's shaky financial institons. But what began as a grand effort to reform Depres--era laws regulating banking has become a struggle to o federal deposit-insurance funds solvent. And as lawmaksink into end-of-session infighting, even that modest—but ential—goal could conceivably get lost in the scuffle.

he Federal Deposit Insurance Corp. ds an infusion of money for both the g Bank Insurance Fund and the thrift nup. The savings and loan bailout can bably wait until Congress returns next r, but the BIF's condition is critical. New C Chairman William Taylor warns that fund's dwindling reserves could run out yearend. The BIF might then find itself ble to pay off depositors if hit with an nticipated bank failure. Odds are that gress will come up with extra money, haps in the form of a temporary stop-. But lawmakers are so reluctant to e for anything that looks like a bank out that they might skip town and pray the BIF will make it into spring.



TAYLOR: THE TILL IS NEARLY EMPTY

DED DOWN. The Administration and Hill lers agreed months ago to lend the BIF billion from the Treasury. But that deal ntangled in broader issues of banking rm. The Treasury wants to let banks branch nationwide enter new markets, such as investment banking and insure. But the House has already rejected two reform plans. h time, the insurance and securities industries succeeded in aching so many restrictions that bank lobbyists helped kill measures. An exhausted House now will consider only a that refinances the BIF and tightens regulation on banks. he Administration, however, just won't give up. While the of giving banks new powers is dead, the Treasury still believes that the Senate will let banks branch across state lines. "In terms of modernizing banking, that is probably the single greatest step we can take," says Robert R. Glauber, Treasury Under Secretary for finance. He hopes that in the rush to adjourn, the House will accept the provision.

That strategy could cost the Administration—and the banks—dearly. Bankers fear that a broad bill will pick up crippling provisions. They got a nasty scare on Nov. 13, when the Senate voted 74-19 to attach an amendment to the banking bill that caps interest rates on credit cards at 14%. While leaders appear to have squelched rate-cap fever in the House, "we feel like we're in the middle of a feeding frenzy," says Samuel J. Baptista, president of the Financial Services Council. "We couldn't get a more poisoned atmosphere if we tried." Worse, the Treasury's one last swing for the fences could jeopardize the BIF's funding by dragging out the debate. With adjournment set for Nov. 27, "we are at the zero hour," warns Representative John J. LaFalce (D-N. Y.).

The bank battle has left little time for another contentious issue: injecting $80 billion into the Resolution Trust Corp. (RTC), which is running out of money needed to shut down sick thrifts and dispose of their assets. On Nov. 19, the House Banking Committee narrowly voted to fund the S&L cleanup on a "pay as you go" basis, which would be cheaper in the near term—but would force spending cuts to cover bailout costs. No one wants that, so "pay as you go" would effectively paralyze the RTC, adding to the eventual cost of the cleanup.

Conventional wisdom in Washington holds that Congress can't leave without at least ensuring that the BIF is funded. To do so would be a huge gamble, but the mood at the Capitol is so sour these days that nothing can be taken for granted.

By Mike McNamee

PITAL WRAPUP

IE SENATE

he fortunes of Senate Republicans may be getting caught in a vicious cle. The GOP's poor prospects for reining control of the chamber anyne soon are leading some senior embers to think hard about retirent next year. And with more incumnts deciding to step down, chances e that the party's strength will slip low its already paltry 43 seats.

Right now, GOP strategists are most rried by Minority Leader Bob Dole Kansas, who is mulling retirement ter 24 years in the Senate. Dole, 68, ght face a stiff challenge from Demratic Representative Dan Glickman. The popular Glickman has hired campaign consultant James Carville, who is credited with engineering Democrat Harris Wofford's upset over Richard Thornburgh in this fall's special Senate election in Pennsylvania.

Another senior GOP senator, Warren Rudman of New Hampshire, has also been talking about quitting. Republicans would have a very good chance of holding that seat if White House Chief of Staff John H. Sununu runs, as is likely. But the GOP may have trouble hanging on to seats being vacated by Jake Garn in Utah and Steve Symms in Idaho. And Senator Bob Packwood of Oregon is regarded as highly vulnerable next year.

PENSIONS

A losing record in court is driving the government's pension-insurance fund to seek help from Congress. The Pension Benefit Guaranty Corp. was shaken by a recent Supreme Court ruling denying its bid to move ahead of other creditors of bankrupt LTV Corp. Now the PBGC, which must pay off the beneficiaries of failed pension funds, is pushing a bill to give it priority over unsecured creditors in bankruptcy. The measure, which won't be taken up this year, has split business. Some companies feel it would hurt their own claims in bankruptcy, while others hope it will avert a PBGC premium increase.

SUSAN J. STEINKAMP/SABA

JAPAN'S BANKERS ARE PULLING IN THEIR NECKS

They're getting clobbered by bad real estate loans around the world and bankruptcies at home

They're not much bigger than shoe boxes, but the tiny studio apartments Shoji Kanazawa once peddled were the biggest thing going in Japan's overheated real estate market of the 1980s. Kanazawa's company, Maruko Inc., moved 31,000 of them, and the more it sold, the more its bankers wanted to lend. Mitsubishi Trust & Banking Corp., Kanazawa's lead bank, funneled $418 million into Maruko. Others kicked in $1.8 billion more, allowing Kanazawa to branch out into Tokyo office towers, Hawaiian property, and even fine art.

Then, in 1989, Bank of Japan Governor Yasushi Mieno clamped down on easy money to curb inflationary speculation in real estate and stocks. As interest rates soared from 4.9% to 8.9%, condo sales and Kanazawa's fortunes nosedived. Kanazawa pleaded with his lenders for more cash, but none would accede. By last summer, Maruko was bankrupt. Says Masayuki Sagawa, a Mitsubishi senior manager: "The situation was much worse than we expected."

'BASKET CASES.' Sagawa isn't the only Japanese banker expressing shock and dismay these days. As a record-breaking wave of real estate-related corporate failures sweeps the country (charts), one bank after another is being forced to shoulder unprecedented quantities of bad debts. Indeed, with the banks now holding some $600 billion worth of property loans at home and tens of billions more abroad, these mammoth lenders "seem to have turned into financial basket cases overnight," says analyst David Marshall of London's IBCA Ltd. "You're going to see much higher problem loans and the potential for large losses," adds Akio Mikuni, owner of a Tokyo credit-rating agency.

Analysts believe most big Japanese banks still have more than enough capital and staying power to see them through their problems. Their near-monopoly on domestic consumer banking alone will probably ensure that. Nonetheless, the rising tide of bad loans marks a stunning comedown for the banks, which in recent years muscled major U. S. and European lenders aside to dominate global finance. Worldwide, Japanese bankers are now retrenchin while they try to nurse troubled projec back to health or sell them off. "A Japanese firm that owns real esta overseas is being forced by its banks reduce its debt," says Gary Pinksto president of San Francisco-based deve oper Meridian Pacific Ltd. "They're ca ing loans and reducing commitments."

The pullback could mean even wor news for the slowing Japanese econom Just like their hard-hit U. S. competitor Japan's banks are becoming increasing

JOHN LABBE

uctant to lend. And while central nker Mieno has been cutting interest es to bolster the economy, the banks' oblems won't disappear soon. Just the t of carrying billions in bad loans will iver "a body blow to profits," con- les a Bank of Japan official. Salomon others Asia Ltd. analyst David M. At- son estimates that $154 billion worth loans—7% of total lending—will be oducing no income by the time the rrent fiscal year ends next Mar. 31. at alone could cost the banks as much $11 billion annually, half of what commercial banks earned in the t fiscal year.

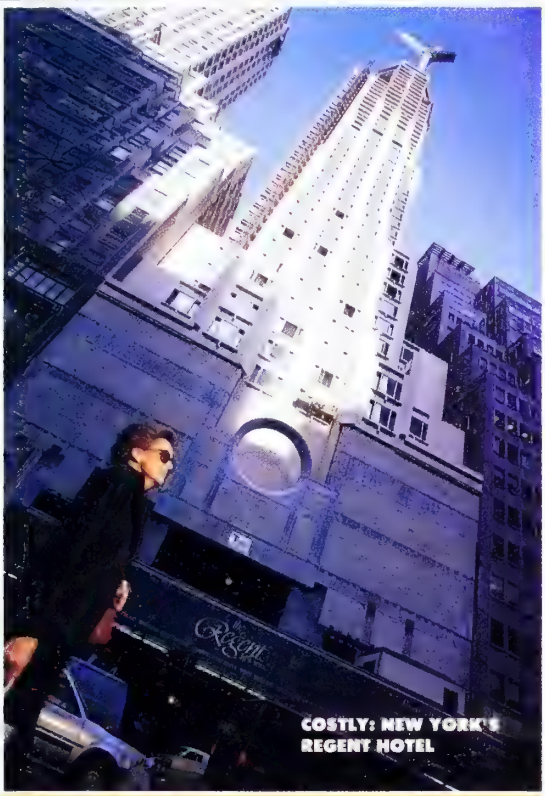
With deregulation of interest es on deposits also eating away income, some lenders, including $409 billion Mitsui Taiyo Kobe nk Ltd., may even post losses. t what's troubling the banks en more than deregulation is nething that never was supposed happen: a slide in property prices. The value of land in Japan soared the late 1980s to $17.3 trillion, rly six times Japan's gross na- nal product. Now, the figures are ng the other way. James Capel cific Ltd. analyst Graeme McDon- says vacancy rates in some new ice buildings in the Osaka and kyo areas are hovering at 30%. ne rents have dropped as much 20%. And the average resale ce for Tokyo-area condos has fall- 19% over the past year, to 3,000. Average home prices are o off, down 30%, to $423,000.

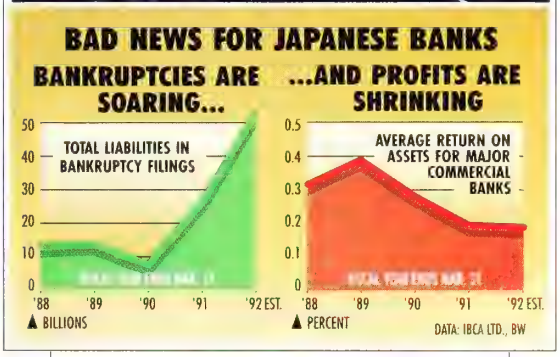
WAIIAN PUNCH. Of all the lenders ept up in the real estate bust, ne has been hit harder than the g-term credit banks. Once the ef bankers to Japan's top corpo- ions, they have had to search for v business as their clients have wn fat with export earnings and rted tapping capital markets di- tly. So the lenders—Industrial nk of Japan (IBJ), Long-Term edit Bank of Japan, and Nippon edit Bank—went after aggressive ck speculators and property de- opers. That shift is now costing lenders dearly.

Earlier this year, for example, the ng-Term Credit Bank had to take over management of resort developer EIE ernational Corp. when it was unable pay the interest on its $5.3 billion in nk debt. Since then, the bank has put the block some $2 billion in resort, el, and commercial properties scat- ed around the South Pacific, the U. S., d Britain. But sales are going slowly. the meantime, Long-Term Credit and ers have had to pony up $769 million finish several projects. That may sig- even bigger troubles ahead. EIE's 400-room Regent Hotel on Manhattan's swanky East 57th Street is expected to cost $300 million—or $750,000 a room—by the time it's completed next spring. But with interest payments of $50,000 per day, the hotel will have to keep more than half its rooms full—at a steep $260 per night—just to pay the bank.

The news is no better in Hawaii, where overbuilding and the U. S. recession have hit developers hard. EIE, for one, is a year behind schedule on a 350-room resort. Many other Japanese developers are in the same bind. "No one expected this severe an environment to develop so quickly," says Shigeki Matsushima, a senior manager at IBJ, which recently stretched out payment terms on part of a troubled $3 billion resort venture in Oahu. As if Hawaii weren't trouble enough, Japanese police last summer arrested IBJ's top individual borrower for bilking the bank and others out of $2.8 billion. The scandal forced Chairman Kaneo Nakamura to resign.

The U. S. mainland, where the Japanese have lent more than $25 billion to developers, is also becoming a wasteland. New York real estate circles are abuzz with rumors that builders are behind in payments on several Japanese-backed projects. And with $250 million of its $3 billion in California real estate loans listed as nonperforming, San Francisco's $17 billion Union Bank, 77%-owned by Bank of Tokyo Ltd., is hurting. In the third quarter, it took a $90 million provision against possible losses and saw earnings fall 87%, to $5 million.


COSTLY: NEW YORK'S REGENT HOTEL



WAIT AND SEE. Such problems still pale in comparison with some of the banks' difficulties with their own affiliates at home. During the '80s, many banks set up finance companies to handle risky credits they normally wouldn't touch. In short order, the banks funneled an astounding $312 billion through the affiliates to borrowers speculating on land, stocks, and even golf club memberships. Now, the banks are bailing the affiliates out. Take Japan Leasing Corp., 4.9% owned by Long-Term Credit Bank. With $1.5 billion of the company's $10.8 billion in loans gone bad, LTCB is seizing assets to raise cash. It has also lent Japan Leasing $2 billion.

Despite the growing problems, Japanese financial regulators have been surprisingly reluctant to order banks to begin a U. S.-style write-down of bad loans. In fact, the Finance Ministry actually discourages banks from taking charge-offs, thus leaving lenders free to paper over their problems. Instead, regulators are urging lenders to sell bad assets over several years to minimize their losses. "This strategy has always worked in the past," says analyst Marshall, "because land prices only fell once in the last 30 years."

But will the strategy work again? Mieno's warnings against another property boom have kept a lid on real estate. And while big banks own $446 billion in corporate equities, enough to cover as much as 10% of their loans, they are reluctant to sell. The stocks cost only $226 billion. But large-scale disposals might inflict new damage on Tokyo's shaky stock market.

For now, the banks will try to tough it out in hopes that the Japanese economy and the international property market come back to life. "Time is the greatest cure," says John Z. Bulkeley, executive vice-president at Union Bank. But this cure is likely to take a lot longer—and be a lot more unpleasant—than any of Japan's lenders ever dreamed.

By Ted Holden in Tokyo, with Rick Daysog in Honolulu and William Glasgall in New York

FREDERICK CHARLES

INVESTORS WERE BURNED BY MEXICO'S STEEL MILLS

WHY JAPAN INC. IS STEERING CLEAR OF MEXICO

Investors, still smarting from spoiled deals, are playing wait-and-see—with emphasis on the wait

Walk through Japan's small enclave in Mexico City, from the Japanese embassy to the Hotel Nikko, and you'll hear mostly grumbling. Japanese bankers grouse about the hit they took on Mexican debt. Japanese trading giants wrestle with sour investments in Mexican steel. Other Japanese lament collapsed deals and confusing laws. They complain about corruption, unskilled labor, and pothole-ridden highways. Says one Japanese executive: "We've had bad experiences here."

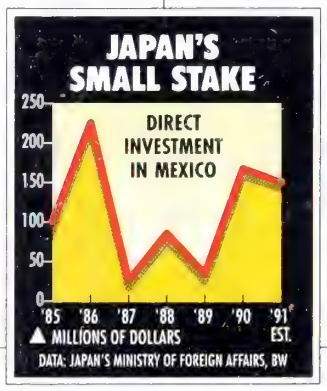
When Mexico opened its market six years ago, Mexicans expected—and Americans feared—a rush of Japanese investment. But Japanese companies are barely dipping a toe into Mexican waters. Far from home in a land that has dealt them nasty surprises in the past, the Japanese still wonder if Mexico's modernization is for real. "There's a basic lack of trust," says Mitsuo Sakaba, a Latin America director at Japan's Ministry of Foreign Affairs in Tokyo. "It's a very cold atmosphere."

Three years into Mexican President Carlos Salinas de Gortari's administration, no big new Japanese player has arrived. Japan, with less than 5% of the foreign investment in Mexico, still trails Britain and Germany and holds only one-twelfth of the U. S. total, which tops $21 billion. It all could change, but at least for now Japan's slow approach to Mexico suggests that U. S. manufacturers and policymakers may be overestimating the threat of Japan using Mexico as a cheap manufacturing platform. Instead, Mexico is one place where the U. S., with its strong cultural ties, still enjoys an advantage. "The Japanese are way behind the curve on Mexico," says a Western diplomat in Mexico City.

While Americans are busy positioning themselves in Mexico in anticipation of a free-trade deal, the Japanese are waiting. They want to see a done deal before committing. And they know that a big investment rush south could spark anti-Japanese fears in Washington. That, in turn, could lead to high North American content requirements in the free-trade agreement (FTA), forcing Japanese manufacturers to obtain more parts locally. But even with low barrie to trade, Japanese investment in Mexi is likely to be slow and incremental. Ce tainly, there will be no stampede. "Th FTA does not guarantee trustworth ness," says Sakaba.

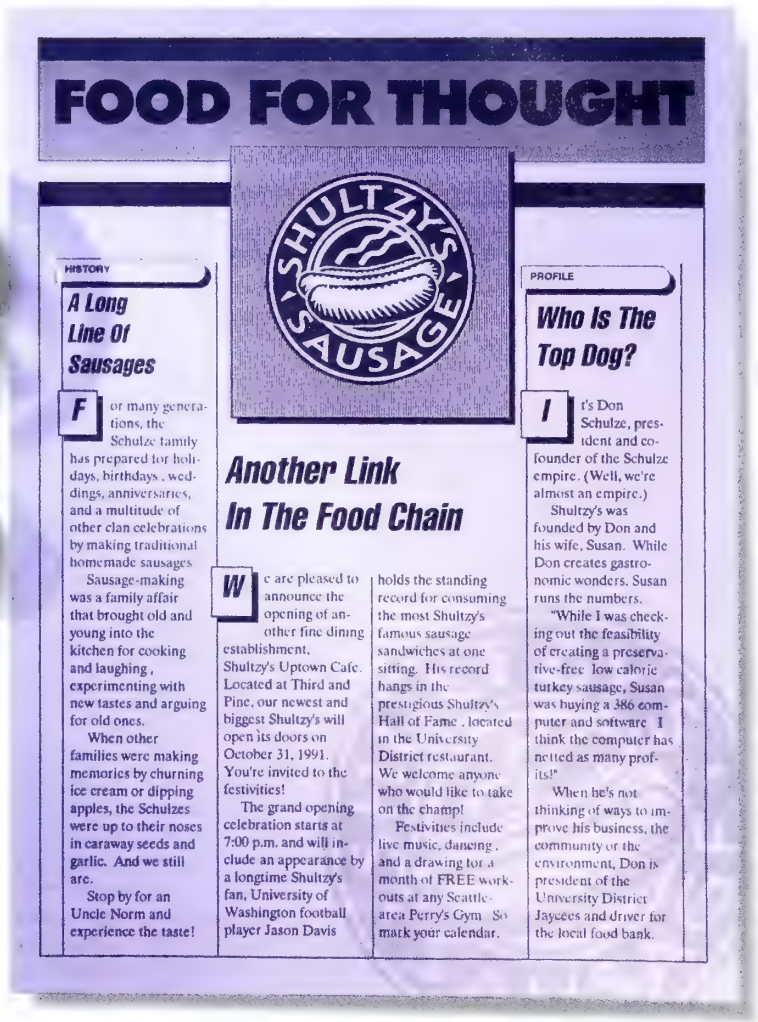
HARD SELL. Japan's reluctance mystifi Mexican officials, who privately cor plain that the Japanese are backtrac ing. Throughout the 1980s, Sanyo, Hit chi, Matsushita, and others set u assembly plants on the border. Salina began trumpeting Mexico as a Pacif Rim country. As he moved Mexico t ward a free-trade pact, the hope w that the Japanese would deepen the presence in low-wage Mexico. Now, eve Salinas admits frustr tions. "I told them that they continued to wa they would end up wa ing forever," he say "That would benefit n ther them nor us."

The only big Japanes investor in Mexico is Ni san Motor Co., which a rived 30 years ago a now represents near half of Japan's Mexica



PHOTOGRAPH BY KEITH DANNEMILLER SABA. CHART BY ERL HOFFMANN BW

New Microsoft Publisher makes newsletters look doggone good.



FOOD FOR THOUGHT

SHULTZY'S SAUSAGE

HISTORY

A Long Line Of Sausages

For many generations, the Schulze family has prepared for holidays, birthdays, weddings, anniversaries, and a multitude of other clan celebrations by making traditional homemade sausages.

Sausage-making was a family affair that brought old and young into the kitchen for cooking and laughing, experimenting with new tastes and arguing for old ones.

When other families were making memories by churning ice cream or dipping apples, the Schulzes were up to their noses in caraway seeds and garlic. And we still are.

Stop by for an Uncle Norm and experience the taste!

Another Link In The Food Chain

We are pleased to announce the opening of another fine dining establishment, Shultzy's Uptown Cafe. Located at Third and Pine, our newest and biggest Shultzy's will open its doors on October 31, 1991. You're invited to the festivities!

The grand opening celebration starts at 7:00 p.m. and will include an appearance by a longtime Shultzy's fan, University of Washington football player Jason Davis holds the standing record for consuming the most Shultzy's famous sausage sandwiches at one sitting. His record hangs in the prestigious Shultzy's Hall of Fame, located in the University District restaurant. We welcome anyone who would like to take on the champ!

Festivities include live music, dancing, and a drawing for a month of FREE workouts at any Seattle-area Perry's Gym. So mark your calendar.

PROFILE

Who Is The Top Dog?

It's Don Schulze, president and co-founder of the Schulze empire. (Well, we're almost an empire.)

Shultzy's was founded by Don and his wife, Susan. While Don creates gastronomic wonders, Susan runs the numbers.

"While I was checking out the feasibility of creating a preservative-free low calorie turkey sausage, Susan was buying a 386 computer and software. I think the computer has netted as many profits!"

When he's not thinking of ways to improve his business, the community or the environment, Don is president of the University District Jaycees and driver for the local food bank.

In business it's important to look your best. Which is precisely why Don Schulze, owner of "Shultzy's" started using Microsoft® Publisher for Windows.™ You see, unlike all those other software applications, Publisher makes it easy to create professional quality publications.

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So whether Don is preparing a newsletter hailing the *sausage of the month*, redesigning his menu to include a new nitrate-free kielbasa, or simply updating his letterhead, business cards and business forms, he knows he's always going to look good. And if you thought you couldn't do things like this, you're wrong. Because with Publisher you absolutely can.

Furthermore, since it runs under the Windows 3.0 graphical environment, it works less like a computer and more like you.

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stake. Nissan Mexicana President Shoichi Amemiya says that despite an impending free-trade agreement, Mexico is a hard sell in Tokyo. "People back home still don't believe in Mexican quality," he says. Frustrated by the Third World conditions in Mexico, many Japanese companies still put their North American investments north of the border. Sony Corp. considered Mexico for its $370 million TV plant but opted for Volkswagen's shuttered facility in Westmoreland County, Pa. "Labor cost is only one factor," says Koichi Kawakyu, the president of Sony's San Diego-based company, Display Products of America. "We need more high-skilled workers and technicians."

The Japanese also worry about Mexico's political volatility. While U. S. investors trust that Mexico's market opening is definite, the Japanese aren't sure. American investors enjoy the company of Mexico's young Ivy League-educated rulers and marvel at how good Mexican workers are once they're trained. By contrast, the Japanese dwell on how much training workers require. They look at Mexico's record trade deficit and worry about inflation. They wonder who will follow Salinas in 1994. "Many Mexican Presidents have been terrific for the first three years and then, whoosh, they change," says the president of a Japanese trading company in Mexico City.

CLUB MEX. The Japanese don't easily forget history, particularly one that has left them with bruises. In the late 1970s, for example, oil-hungry Japan forged an alliance with Mexico that guaranteed crude shipments to Japan, while the Japanese invested in Mexican steel works. Mexico's booming oil monopoly, Petróleos Mexicanos, seemed to have a limitless appetite for steel pipes. But Pemex bought its pipes elsewhere, and delays at the state-run steel mill pushed up costs at the Japanese mills. Then the 1982 debt crisis shriveled local demand. Today, government steel mills are on the block, but the Japanese aren't nibbling. "Mexico's not in the picture," says a spokesman for Kobe Steel in Tokyo.

Only two years ago, Japanese bankers took a big hit in the U. S.-sponsored Brady debt-reduction plan, which forced banks to forgive debt or lend anew. Japanese lenders lost some 60% of their Mexican portfolios in 1990, or about $4.3 billion, according to Japan's Foreign Ministry. Mexico's Ambassador to Japan, Alfredo Phillips, has been knocking on doors in Tokyo. But unlike U. S. banks such as Morgan Guaranty Trust Co. and Citicorp, which have rushed new loans into Mexico, Japanese banks are not convinced. "Our bitter experience in the past discourages us," says Yukihiro Fujiwara, senior managing director at Sanwa Bank Ltd. "We cannot forget the bloodshed."

THE JAPANESE THINK FREE TRADE MAY HURT THEIR *MAQUILADORAS*

Although the Japanese understand opaque decision-making in places such as Indonesia or Thailand, Mexico often stumps them. In a much-ballyhooed deal in 1988, Pemex reached a preliminary agreement with Mitsui Co. for a $450 million aromatics plant near Monterrey. Mitsui would build the plant for Pemex and receive payment in product. Finally, big Japanese cash was on line. But when the Mexicans brought the agreement home, Pemex accountants rejected it as too generous for Mitsui and reopened bidding. France's Spie Batignolles rushed in, and Mitsui, bitter and confused, has nearly dropped out, say Mexicans close to the deal.

The postmortems on the Mitsui deal spread the blame all around. U. S. oil-company executives say Mitsui, knowing how eager Mexico was for Japanese investment, crafted a sweet deal and got called on it. A Pemex official says the deal is proceeding, but slowly. And Mitsui is waiting "for Pemex to clarify the intent," says a Tokyo-based official.

But Mexicans say that with the right contacts and knowhow, the Japanese could have driven the deal home. In Mexico's clubby business and government circles, agreements often need the right follow-up: a mixture of cajoling and hardball threats. What's more, insiders add, Mitsui worked through a Mexican representative whose political contacts were passé. Such intrigues of dealmaking in Mexico favor Americans who have long been active in Mexico.

> Mexico's clubby business and government circles favor Americans who have long been active there

SUSHI RUNS. For now, the Japanese are sticking close to their *maquiladora* base along the U. S. border. Sony, Sanyo, and others have transformed Tijuana into the TV-making capital of the world. Japanese managers live a comfy California life in Chula Vista and Coronado, a short drive from San Diego's sushi bars.

But even in their border stronghold, the Japanese feel threatened. Country-of-origin rules in the free-trade pact, the fear, could punish them for using Asian parts. Currently, the companies import components to Long Beach, Calif., and truck them unpacked and duty-free to Tijuana. There, they assemble TVs, refrigerators, and other appliances and ship them back to the U. S. Japanese executives in Tijuana were rattled last year when a visiting Mexican Cabinet secretary remarked that with free trade the *maquiladora* industry would disappear. It was just an off-hand joke. But the Japanese didn't think it was funny.

Other than *maquiladoras*, there's Nissan. The auto maker is plowing $1 billion into Mexico, $400 million of it into a new export plant to assemble compact Sentras in the city of Aguascalientes. Nissan says it does not plan to ship cars to the U. S., where the company already builds Sentras at a plant in Smyrna, Tenn. Instead, the new plant will export to the rest of Latin America and, in a bold gamble starting late next year, back to Japan. Nissan Mexicana President Amemiya is betting he can match Japanese quality. But judging from the mood in Mexico City and Tokyo, Nissan will have to score a spectacular success before the rest of the Japanese bet the money on Mexico.

By Stephen Baker in Mexico City and Karen Lowry Miller in Tokyo

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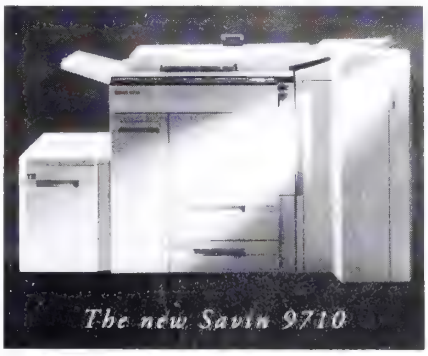

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AN

N AMERICAN EAGLE ALKS TURKEY WITH THE TAIWANESE

pped, McDonnell Douglas is selling 40% of its airliner business

areth Chang has been flying high on Asia. An 18-year veteran at McDonnell Douglas Corp., the ese-born Chang is best known for neering a breakthrough deal in 1979 ssemble MD-82 twin-engine jets in a. So why in recent months was ng showing up in Taipei at swank aurants with Taiwanese officials? nd the scenes, the McDonnell Doug- ice-president was working on a big- deal: The company confirmed on 19 that it is selling up 0% of its airliner busi- for $2 billion to Taiwan space Corp., a new gov- nent-backed group.

ne buy-in would be the gest move so far by ns into the U.S. com- cial jet business. Cash- they are eager to bite a big piece of the indus- long a U.S. export nghold. "What the talks Taiwan Aerospace rep- nt is the recognition the Asia Pacific is com- into its own," says the ear-old Chang.

or McDonnell Douglas, a nt third in its industry, sale is a matter of sur- l. The company's debt is $4.8 billion, up from $2 on in 1986, and it an- nced plans last year to ce its head count by up 7,000 workers. "We are ng to potential partners can offer low-cost, -quality production and ss to their markets in region," explains CEO F. McDonnell.

HT BOOM. McDonnell Douglas is lly alone in turning to Asia. In May, dog Boeing signed a contract with e Japanese powerhouses—Mitsubi- Heavy Industries, Kawasaki Heavy ustries, and Fuji Heavy Industries— ing them "super subcontractors" for Boeing 777. Even No. 2 Airbus In- rie is making overtures, a big switch use its four European partner com- es have so far kept all the work for nselves. Airbus hopes the Japanese help develop the Super Airbus, a plane with 600 to 700 seats proposed for production later in the decade.

Air travel in Asia is booming. A McDonnell Douglas study predicts that passenger traffic within the Far East and across the Pacific will grow 10% to 12% annually for the next 20 years. Malaysia, Thailand, and Indonesia are beefing up their airlines. "By 2010, passenger traffic in this region will roughly equal that of the U.S.," says Adam M. Pilarski, McDonnell's chief economist.

Gareth Chang avoided riling Beijing, but the deal rings alarms in the U.S.

The Asians want a big role in that market. Taiwan's government, in particular, has a grand vision to become a world player in avionics, airframe construction, and aircraft design through Taiwan Aerospace. As they did successfully in the computer industry, the Taiwanese hope to wed public and private sectors to provide capital while counting on partnerships with foreign companies such as McDonnell Douglas for advanced technology. Taiwan can also provide plenty of U.S.-trained engineers. "It's hard to find a guy there without a PhD," says Chang, who holds an MBA from Pepperdine University.

Until now, Taiwan Aerospace has been a fledgling player. It has a mere 40 employees and only recently bought a factory in the city of Taichung, home of Taiwan's defense industry. Once the McDonnell Douglas deal is signed in January, Taiwan Aerospace expects a rush of investment from Taiwanese corporate shareholders, who "all have deep pockets," says Denny Ko, the company's president. To create an Asian consortium, McDonnell Douglas is hoping to sell an additional 9% interest to other players, possibly Japan's Mitsui & Co. and Singapore's Aerospace Ltd. The new team will help build the MD-12 jumbo jetliner. This widebodied trijet would rank as the world's farthest-flying aircraft. With a range of 9,200 miles, it would be ideal for globe-trotting Asian executives.

CREATING RIVALS? The proposed sale has its critics, however. Some argue that McDonnell Douglas is creating what will ultimately be a flock of competitors. "We need to look at the costs of losing critical industries," says Kevin L. Kearns, a fellow at the Economic Strategy Institute in Washington. The deal is already raising alarm bells in the U.S. because it involves the sale of assets in a key industry to a foreign government.

The U.S. government can block a deal if it threatens national security. To blunt criticism, McDonnell Douglas announced earlier this month that it is splitting apart its commercial and military aircraft activities. Also, final assembly of the MD-12 will take place at a plant to be built in the U.S. The company is looking at nine possible sites.

There's a risk that even by throwing production Taiwan's way, McDonnell Douglas still won't pick up major orders from the region. But the smooth-talking Gareth Chang is ready to meet that challenge. Despite the longstanding tension between Taiwan and China, he somehow managed to line up the deal with Taiwan Aerospace without as much as a peep from Beijing. With those negotiating skills, the rest may come easy.

By Dinah Lee in Hong Kong, Chris Brown in Taipei, and James E. Ellis in Chicago, with bureau reports

LINCOLN POTTER/GAMMA LIAISON

EDITED BY STANLEY REE

WHAT A FREE UKRAINE COULD COST THE SOVIET UNION

In the Ukraine, a cutback of oil from the Russian republic has already hampered this year's corn harvest, and sugar mills are grinding to a halt because of a lack of spare parts. But Ukrainians are pressing ahead with independence from their Russian neighbors, whom they have viewed as oppressors since the days of the czars. In a referendum scheduled for Dec. 1, they are likely to vote overwhelmingly for full secession. "The Ukraine must take its place in Europe," vows Ukraine parliamentary Chairman Leonid Kravchuk, who is expected to be elected President at the same time.

The breakaway of the No. 2 Soviet republic—in both population and economic clout—will be a death blow to President Mikhail Gorbachev's efforts to rebuild a united Soviet state on the ruins of the former Soviet Union. Boris N. Yeltsin, President of the Russian republic, has already done grave damage with his decrees aimed at grabbing control of natural resources. Without the Ukraine, Gorbachev and Yeltsin will be left vying for control of Russia and a grab bag of impoverished Asian republics.

MOSCOW WILL SHELL OUT MORE FOR KIEV'S CORN

BORDER SCUFFLES. The Ukraine's departure will also hurt Russia economically. The Ukraine has long provided the Soviet Union with 33% of its steel, 25% of its coal, 60% of its corn, and 25% of its wheat. But soon, according to Kravchuk, a wily former Communist boss, Russia will have to pay world prices for Ukrainian goods and deal with it as a sovereign state. By the end of 1992, Kravchuk plans to have a Ukrainian currency, the grivna, and a 400,000-strong national army.

A trade war is already raging between Russia and the Ukraine, which has 52 million people. Motorists in Kiev now have to wait all night to fill up their tanks, because Russia is curbing supplies of oil—along with timber and natural gas. At new customs posts, Ukrainian border guards stop vegetables and machinery bound for Russia. The Ukrainians are als bickering with Russia about paying off Soviet debt to th West. Before agreeing to share in this burden, they wan assurances that Russia will respect their independence.

This skirmishing is just the beginning of a chain reactio likely to be unleashed by the Ukraine's independence. Russi has already announced that it will respond to a Ukrainia currency with one of its own. Kazakhstan may create its ow army. Soon, Western observers note, nearly all former Sovie republics could boast their own armies, money, and not-neces sarily-responsible governments.

That will have scary strategic im plications. While the Ukrainian pa liament plans to ratify the START an Conventional Forces in Europe arms control accords, the U. S. is still ne vous about the nuclear aspects of Soviet breakup. There may have t be new rounds of talks with Kazakh stan and the Ukraine over arms co trol. But at present, the Ukraine saying it will turn itself into a n nuke state by 1995, mainly by d stroying or shipping strategic mi siles to Russia.

Immediately after the referendu and elections, the new Ukrainian President will apply fo International Monetary Fund and World Bank membershi and try to sidle up to the European Community. A privatiza tion program is likely to follow. But the cost of Ukrainia independence will prove high. The fear in Kiev is that Russi will react with an economic blockade, which would worsen th winter's shortages and provoke clashes between Ukrainian and the republic's 11 million ethnic Russians. But if cool head prevail, the Ukraine's independence could mark the end fruitless efforts by Moscow to salvage its empire. Only the over time, can the former republics form viable new links.

By Rose Brady in Ki

GLOBAL WRAPUP

CHINA

In the wake of Secretary of State James A. Baker III's disappointing Beijing visit, the Bush Administration and U. S. Customs Service are at odds over their approaches to China. Customs wants to hold the Chinese accountable for trade violations, including using prison labor and violating textile quotas. But the Administration, trying to keep trade doors open, is discouraging disclosure of damaging information on China. It is dragging its feet on authorizing Customs to hire new investigators in Hong Kong, while the State Dept. is slow to hand over information on problem Chinese factories. "Cracking down on China isn't what you'd call a career-friendly move," says one customs officer.

Ignoring the White House, Customs is pressing ahead with investigations of imported Chinese garments bearing false country-of-origin labels. Customs sources predict a surge in raids on Chinese-controlled companies in the U. S. thought to be violating quotas.

SAUDI ARABIA

Conservative Arab oil states are softening their once-rigid anti-Israeli line. Kuwait now does business with companies on the Arabs' boycott list, saying it needs all the help it can get rebuilding. The winds of change are also sweeping Saudi Arabia, whose population is among the most traditional in the Muslim world. In a wide-ranging TV policy address on Nov. 14, King Fahd spoke out in support of the Madrid peace talks and, in a first for a Saudi king, mentioned Israel by name several times. There was, said Fahd, "no alternative to peace." Days later, the kingdom's top religious leader, Sheikh Abdul Aziz bin Baz, backed the Saudi decision to sit at multilateral peace talks with Israelis, noting that Jews had been early supporters of the prophet Muhammad. Fahd is also pledging cautious moves toward democratization by unveiling plans for a consultative assembly next January.

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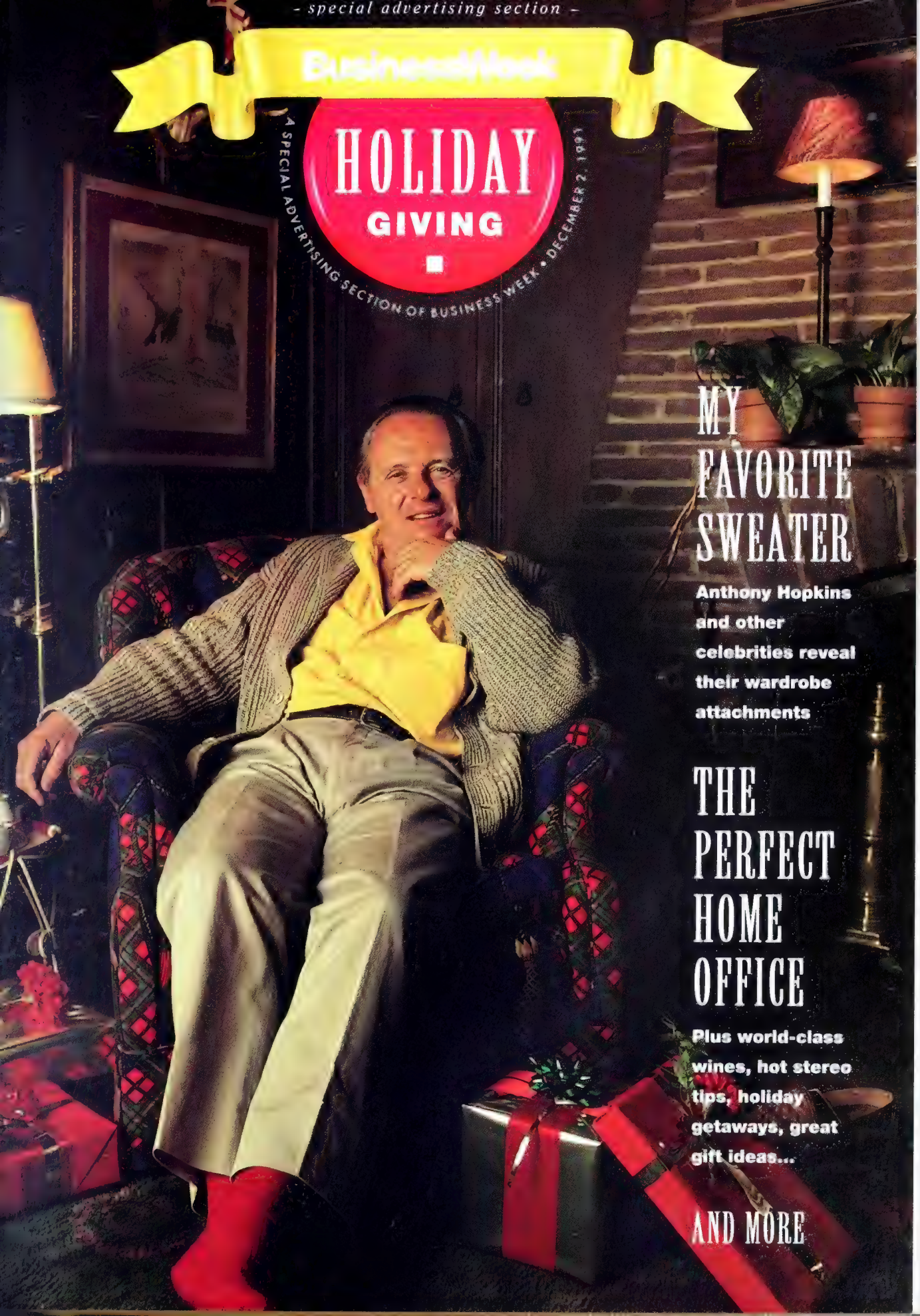

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Magazine Prescription

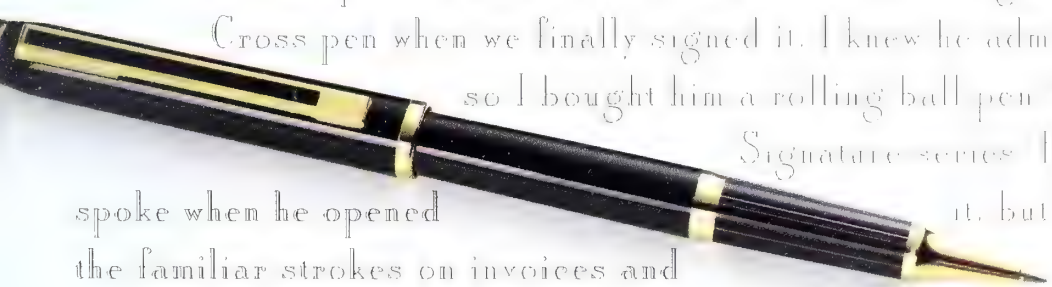
The American Magazine, an illustrated history, by Amy Janello and Brennon Jones. Published by Abrams, $60.

Dinner Bells

Plates, $150 each, at Gump's. (415) 982-1616. Napkin ring by Mark Rossi, $18, at Bergdorf Goodman. (212) 872-8678.

My Friend, the Bookworm from Hoboken.

I had never met anyone who considered textbooks summer reading material. I also never met anyone who had more than two pocket protectors. He was quiet, but confident. So confident, he had our business cards printed before the lease was written. I gave him the Cross pen when we finally signed it. I knew he admired mine so I bought him a rolling ball pen from their Signature series. He barely spoke when he opened it, but I've seen the familiar strokes on invoices and memos. I think he'll always have it with him. Actually, I know he will. It's the only one he keeps in his pocket protector.



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Black umbrella, $20, at the MoMA Design Store. (800) 447-6662. Red, $295, at Goldpfeil. (800) 486-FILE. Plaid flannel, $45, at Barneys. (212) 929-9000.

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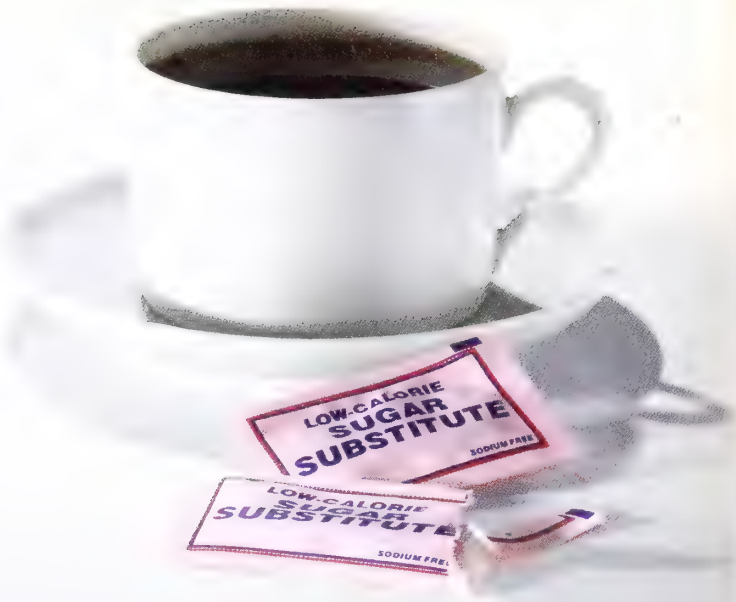
- Noblia's Curved Case Sapphire watch, $195, available at all fine jewelry stores nationwide.
- TAG Heuer's Professional Sports Watch, $1,895, available at all fine jewelry stores nationwide.
- Red Velvet Pop Swatch, $40, available at all fine jewelry stores nationwide.
- This Braun watch, $185, was designed by Dieter Rams. It is available from the MoMA Design Store. (800) 447-6662.



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—Patrick Netter

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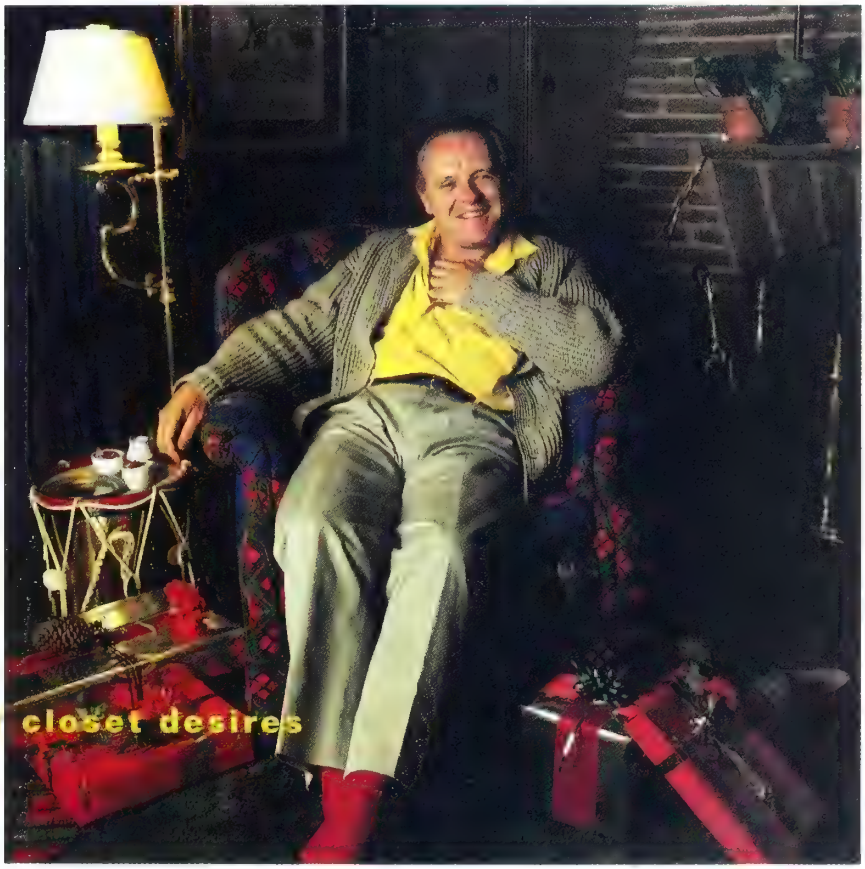
James Galway, musician

I bought my favorite sweater at a shop in Westport [County Mayo, Ireland]. When I went in there they showed me this nice Irish sweater. It was a traditional fisherman's knit. But I saw this touristy-looking green one next to it, and I fancied that. I couldn't really buy it because they were offering to give me the traditional one as a gift. So I sent my wife in to buy the other one. I wear it all the time. For concerts, I have to be dressed up. For example, playing in Buckingham Palace, you wear—well, to tell you the truth, I wore the green sweater at the rehearsal for our Buckingham Palace concert. Her Majesty must have wondered what they let in the back door. I like the color of the sweater. And, you know, you couldn't have a much more Irish combination than me and that sweater.

My Favorite Sweater



about their closet desires

Anthony Hopkins, actor

Describe my sweater? It's a tan cardigan made from good Scottish wool. There are two pockets and five buttons with corresponding holes. I wore it in *A Change of Seasons*, a picture I did in 1980 with Shirley MacLaine. It was a piece of wardrobe [for the film] that I walked off with. When I put it on, I feel an agreeable ease, a degree of comfort. I've had it for nearly twelve years, and it seems to be holding up rather well. Not that it's especially remarkable-looking. I don't recall its ever being complimented. I doubt that anyone else's appearance would be enhanced by it either. The sweater itself might become more exciting were someone like Michelle Pfeiffer to wear it as a single garment. Just a thought. ▶

by Marion Long

My Favorite Sweater

MICHAEL ZAGARIS

Dave Stewart, athlete

My favorite sweater is a white button-up cardigan, with gray and khaki-colored triangles along its border. It was a gift to me from my wife, Vanessa, about six years ago. I just love it. It's the kind of thing you always hope you can find: a piece of clothing that you really feel good in, that you think looks good, and that you can wear whenever you feel like it. That's probably the thing I like best about the sweater: its versatility. I can wear it with dress slacks and a nice shirt, or with jeans and something simple. I wear the sweater nearly all the time, both during the day and at night. I've worn it in all kinds of places, to all kinds of events, in all kinds of moods, and I've always felt good in it, and dressed appropriately. I've had it for a while now, and I plan to hang onto it for as long as it holds together. Also, my favorite girl looks great in my favorite sweater.

DEBORAH FELSON

Elaine Garzarelli, market analyst

My navy blue sweater was a birthday present from a girlfriend. I like the color, length, and texture. I was wearing it when I received a telephone call from Cable News Network's "Money Line"—they asked me to appear on the show that evening. In a rush, I went to the studio with the sweater on and appeared that night with it on. This was the show when I predicted that the stock market would crash a week later. I've had the sweater for five years and plan to wear it until it wears out. My friends like the sweater, but no one else is allowed to wear it.

Garzarelli had her sweater on when she predicted the market cras

om Monaghan, businessman

The sweater I have in mind is one my ife made for me when we first got arried. My wife's quite a fantastic nitter and crocheter—really great—but e wasn't very great at knitting at that me. I think she learned on this sweater.

I picked out the color; it was sort of a ay-green color. And she worked on that ing for the longest time. It might have arted out as an idea for a Christmas esent, or a birthday. I don't remember actly, but it became such a long-term oject that the original timing got put ide. She worked on it for the longest me. And it turned out to be such an credible thing. One of the arms was so g I could almost get a leg into it. I tried pretend that it was okay, although nyone with two eyes could see the uth. I wore it once—or should I say, I ied to wear it—we went somewhere d I was in it—and then I never saw it gain. And she absolutely will not admit at she threw it out. At that time we ved in a little trailer, so I know it ouldn't have just disappeared. That was years ago, in 1962, and it still comes between us in conversation every nce in awhile. It's my favorite sweater ecause just to think of it makes me ugh and think of my wife.

d Koch, lawyer

My favorite sweater is the Irish rtleneck fisherman's sweater that purchased in Ireland when I visited at country during my first term as ayor. As St. Patrick's Day approaches ch year, I am always asked by New orkers if I will be wearing my Irish weater on March 17. I have indeed orn it every year while marching up ifth Avenue in the St. Patrick's Day arade and have such a special fondness r it since that is always such a onderful day in New York. *

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tems. It can be as simple as plugging any modern television monitor/receiver into an existing stereo system or as complex as building a dedicated $40,000 home theater, complete with movie-size projection TV, half a dozen Surround-sound speakers, free popcorn, and special effects more impressive than the Roxy's.

"Audiovisual is the most exciting thing happening in consumer electronics," says Kenneth Furst of Denon America. "The cheapest thing you can do—and if you don't do it you're crazy—is hook up your television to play through your hi-fi system. It'll cost you $5 [for the cables] at Radio Shack."

Some new generation hi-fi audio receivers, though they cost $700 and up rather than $5, already include the circuitry to process video signals enhanced by Dolby Pro-Logic. The resulting sound doesn't simply issue in stereo from a room-encircling ring of Surround speakers but actually "follows" the movie's action and special effects. (Dedicated Surround-sound amplifiers are also available from a variety of manufacturers, to add onto an already existing hi-fi system.)

"Anybody who spends $1,200 or more for a hi-fi system and doesn't have Surround sound is missing the best way to spend money," says Cambridge Soundworks' Henry Kloss, a hi-fi and audiovisual innovator and inventor. "Any home theater will have it, but I'm talking solely of using it for music. Two very small speakers added to a regular "stereo" system make a much bigger difference than going from $500 to $1,500 speakers."

Take a giant leap from three-digit dollars and you're into another small but rapidly expanding hi-fi trend called "custom install," where pricetags come with five figures. Traditional audiophiles delight in the recording-studio look—shelves of

JBL 250-TI Signature Series speakers

Pioneer's multi-disc player is designed to play up to five compact discs and one 12-inch LaserDisc consecutively. It retails for $700.

winking, humming metal boxes bracketed by loudspeakers the size of steamer trunks—but a growing number of homeowners want the equipment (particularly the speakers) out of sight. So some builders and specialty installers are wiring new and remodeled luxury homes for totally hidden stereos, usually in combination with a dedicated home-theater room. Speakers are built into the walls, electronics are shelved in discreet cabinets, screens disappear into the ceiling, and wiring networks buried in the walls spread sound to every room in the house—typically with small keypads everywhere for remote control of the master system.

Stereo is also spreading throughout the home—as well as vacation house, dorm room, and office—of the committed listener, thanks to the proliferation of complete mini-systems of true hi-fi components far smaller and lighter than the traditional industrial-strength black boxes and loudspeakers. Mini-systems are sold as complete, fit-together units—amplifier, CD player, AM/FM tuner, remote control, speakers, sometimes a tape deck as well—and are small enough to lug straight home from the store and even to move from room to room as desired.

Don't confuse mini-components with inexpensive, integrated "rack systems," often sold by department stores and mall merchants. Too many rack systems are characterized by dazzling face-plate displays—multi-colored lights, cheap tuning meters, a plethora of knobs—hiding a chassis filled with a little cheap circuitry and a lot of air. "They're quality boomboxes," says one audio executive.

The most prominent hi-fi buzzwords this year involve new "signal sources"—DAT (digital audio tape), DCC (digital com- ▸

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pact cassette) and recordable mini-discs. Unfortunately, they also offer new opportunities for consumer confusion. "CD was a godsend to consumers," Richard Frank points out. "Buyers could see and hear the difference." But none of the new signal sources will sound any cleaner than CDs already do. And all will require the purchase of at least some new componentry. Another new high-tech acronym is DSP—digital signal processing. It is typically offered as a feature of more expensive hi-fi receivers. Microprocessors massage the sound of a CD so that at the turn of a knob you can replicate the aural ambience of a variety of typical listening sites: an open-air stadium for a rock record, a cathedral for choral music, a honky-tonk for your favorite redneck. (Or have it your way: Listen to Springsteen singing in a cathedral and put Dwight Yoakum in Carnegie Hall.) Astonishing technology, though many buyers find themselves playing enthusiastically with DSP's possibilities until the novelty has worn off, then leave the box turned to one or two standard settings.

If there is such a thing as an effective guide through the hi-fi minefield, it is the component-knowledgeable specialty audio dealer—and not necessarily the shop that sells only megabuck boxes. A good dealer can afford the time to help a consumer choose equipment attuned to specific tastes, budgets, and listening environments. He or she can help build a well-matched system, since any chain of hi-fi components is only as strong as its weakest link: The best CD player in the world can't send its beauty through bad speakers, nor does it make sense to try and power huge, air-pumping woofers with a modest amplifier that might sound superb in a less ambitious system.

But here's the most important caveat: To find your way across the minefield, you don't need a map. Just listen carefully. ❑

Many state-of-the-art sound systems, with their increasing use of video screens, offer special effects more impressive than the Roxy's.

PRESENTS PERFECT

As the holidays approach, certain hi-fi components are good candidates for any upscale shopping list. Tweakos—the hi-fi equivalent of computer nerds—insist they can detect differences between the sound transmitted through 18 different kinds of speaker wire, but "very few buyers can hear the difference between equivalent electronic components such as CD players and amplifiers," says *Stereo Review* editor Rebecca Day. "Almost everybody will hear a difference between speakers, however." So although the choice of speakers is probably best left to the end user—you might consider giving someone a gift certificate—there are plenty of other electronic goodies that might be as blessed to receive as to give.

• Good headphones provide the least expensive yet most effective entree to totally involving stereo sound.

• "Personal stereos"—those wear-it-around-your-neck microsystems long favored by joggers and commuters—have reached a state of sophistication in which ever-increasing numbers of purchasers are using high-end portable compact disc players as the CD signal source for their home stereos as well.

• Complete hi-fi mini-systems are now making it increasingly possible for one-stop shopping to provide instant hi-fi for anyone from college-bound offspring to in-laws still stuck with their scratchy 1960s system.

• Superb automotive receivers, often in combination with CD players and even CD changers, are of such quality and capability that they will instantaneously upgrade virtually any car's factory-installed system.

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has succeeded...in not just g level with the competition, oving ahead of it."

ould seem that the eight years ngineers had labored over this of Audis had indeed paid off. dres Borchman, editor of AUTO aid, "The new Audi 100 is no number three among the dis- hed German marques, but, test proves, number one." test journalists at MOT made imous: "The Audi is clearly serving winner."

Compared to the $42,950 Mercedes 300E 2.6 and the $35,625 BMW 525i, the Audi 100S is priced at $29,900 That includes V-6 engine, ABS brakes, driver's side airbag, galvanized body and 3-year or 50,000-mile limited warranty.***

Both on the surface and beneath the skin, the new 100 differs dramatically from its predecessors. The styling is more dynamic. The interior is roomier. And the venerable 5-cylinder power plant has given way to a 172hp V-6 engine with superior low-end torque.

One area that wasn't tested but should be mentioned is the Audi Advantage: A program that includes the cost of all scheduled maintenance, even oil changes, for three years or 50,000 miles.

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PRESENT PROTOCOL

by Jeff Zaslow

The new Ann Landers columnist on the dos and don'ts of trading gifts at the office

O.K. Let's recap your holiday gift-giving exploits from last year.

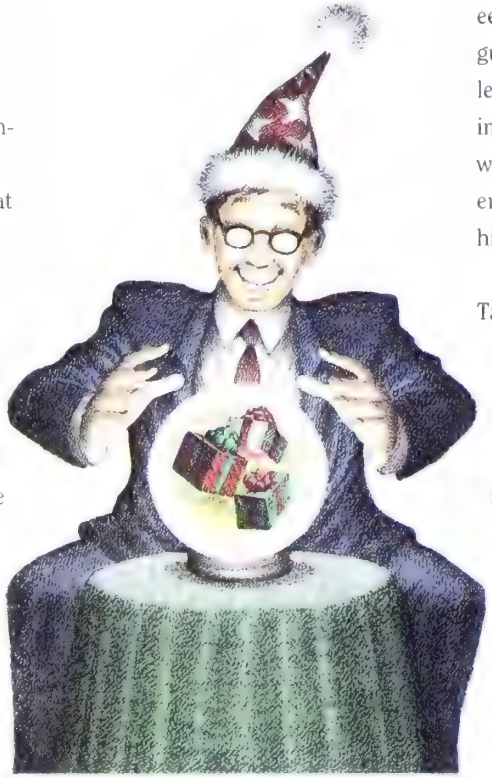
First, there were the well-intentioned gifts for your employees who smoke. You gave them all "smokeless" ashtrays, those noisy gadgets that suck in smoke. "What should we expect from our boss for Christmas next year?" one smoker asked. "Deodorant?"

You gave your male staffers memberships in your exclusive country club. Of course, you didn't know that within weeks, the media would expose the club as racist, sexist, and crawling with call-girls—naming names and embarrassing just about everyone.

Then you bought all the women in the office the same brand of perfume. You assumed they'd like it. Your wife does! "Thanks, boss," one woman told you, eyeing your wife's photo on your desk. "Now we'll all dye our hair blonde, and wear green dresses, pink lipstick—and name tags so you can tell us apart."

You shipped a case of citrus fruit to your company's supplier in Florida. The guy lives next door to a grove, he must love the stuff, you figured. A month later, he called you, laughing. "What'd you send to your supplier in Idaho?" he asked. "Potatoes?"

Finally, in honor of your joint-venture with that Saudi Arabian firm, you sent its president a sculpture of a sprinting cheetah, your company symbol. You included a Christmas card with your family's photograph. How could you possibly have known that Moslems consider animal sculptures to be graven images? Or that they are easily offended by men who don't keep family matters private?



In retrospect, if you were Santa Claus, you'd probably be lucky to be dismissed from your sleigh with a golden parachute.

Well, maybe I can help you overcome these and other problems with this year's gifts. As an advice columnist, I've handled all sorts of queries about gift-giving. Here are a few basic rules:

• Avoid gifts that remind employees of work. Rest assured that the guy in the mailroom doesn't want a letter-opener with the company logo imprinted on it. And if you really want to buy your secretary an ergonomic chair, just don't make it his bonus.

• Keep self-promotion in check. Tasteful doodads featuring understated company logos are okay. But if the logo on the poncho is as big as a billboard, you can safely assume that recipients will feel like walking billboards if they ever wear it.

• Resist giving "gifts" designed as revenue producers. Companies no longer force workers to cash their checks in ▶

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the company store. Instead, a publication called *Profit-Building Strategies for Business Owners* encourages firms that sell merchandise to offer employees the year-end "gift" of a "courtesy discount." The magazine touts the "healthy profit" that businesses can make from potential Christmas-shopping and Chanukah-shopping employees. Soon enough, you can probably bet some corporate Scrooges out there will be demanding that all gift-giving produce company revenues.

• Beware of individualized presents that invite comparisons. Yes, giving all employees the same bonus can seem impersonal. But doing so will help to avoid any suspicions of favoritism, or even more unfortunate, discrimination.

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Consider this letter. It came to me from outside the business arena, but a similar slight could easily happen in an office. A black woman had been a bridesmaid at a white friend's wedding. The bride gave her a ceramic cat as a gift. The other bridesmaids, all white, got beautiful jewelry boxes. "I was stunned," the woman wrote. "Could it be because I was the only black?" I told her to resist assuming race was a factor, and to talk it over with the bride, who might have a logical explanation. But think of it: If you were responsible for this sort of gaffe at your office, even unintentionally, how easily could you explain it?

• Recycled gifts are too risky. People almost always get caught. Consider the woman who for Christmas gave a co-worker a fruitcake from her mother's bakery. The following Christmas, the co-worker gave the woman the same fruitcake (now one year old) in the same tin. "Should I tell her?" the woman asked me. (I said no: "Just bring it home and use it as a doorstop.")

I get a lot of letters about recycled gifts. One woman received an apron covered with gravy stains. Another was given a hair-curling kit with long hair (the gift-giver's) hanging from one of the curlers. A man received a bathrobe as a gift and, since he already had three robes, tried to return the "new" one to the department store. That's when he learned the store hadn't carried the robe in over seven years.

Dozens of readers have written to me of opening a gift and finding a card addressed to the gift-giver at the bottom of the box, or of receiving a gift with engraved initials on it—the gift-giver's!

• "Take-a-hint" gifts are too blatant. You might fantasize about giving the office do-nothing a stack of job-hunting manuals wrapped in the newspaper want-ads. But that's not in the holiday spirit. Just wait until January to fire the lazy bum.

• Ask around before you give gifts to business contacts in foreign countries. It's easy to get burned if you're ignorant about local customs. In her book, *The Art and Etiquette of Gift-Giving* (Bantam Books, $18.95), Dawn Bryan cautions that a businesswoman should never give a gift to a Latin man; it may be misinterpreted. In Italy, people are leery of any gift with purple in it; that's the death color. And many Japanese will become insulted if you give them anything made in Korea, or if you hand over a gift using just one hand.

• The best gifts don't need to be wrapped. Speaking on behalf of its 40,000 members, Professional Secretaries International (PSI) wisely points out that flowers wilt and candy is quickly eaten. If you want to give a gift that is really appreciated, PSI recommends: a day off with pay; a bonus of shares of company stock; financial assistance for higher education; or, best of all, a raise!

Need more free gift-giving advice? Just drop me a line (box 3455, Chicago 60654). I'll try to help you out. If I don't hear from you, though, I'll still be plenty busy. Within a couple of weeks, I'll probably start getting a lot of mail from folks complaining about their bosses' presents. Here's hoping I don't hear about you.

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Now, if you have this sort of person on your shopping list, the good news is that it couldn't be easier to decide what to buy for him or her. The bad news is that, once you've decided on a gift of wine, you'll be faced with thousands of choices—and the overwhelming majority of those choices, so far as the wine buff is concerned, will be flat dead wrong. The wine buff has rigorous standards and is nothing if not critical.

by Laurence Shames

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For instance, more than 70% of all wine sold in this country is white, but the wine buff will tell you that, while the occasional glass of Montrachet is hardly to be despised, the only passion-worthy wines are red. Similarly, something like 95% of all the wine produced in the world is meant to be consumed within a year or so of the vintage; to the buff, this ocean of young wine is barely worth gargling with. Serious wines are older wines, and if they're not old yet, then they have to be worth waiting for.

If the above sounds arcane or intimidating, don't worry—it's not your problem. Your problem is only to pick out a bottle or two for a fanatic. So here are some suggestions on how to do it with grace.

I'll start with wines in the $15 to $20 price range because, while there are plenty of enjoyable bottles around for less, fifteen bucks is roughly the point where pleasure deepens into fascination. Wine buffs appreciate an undervalued wine, and take great joy in a smartly-chosen bargain.

Chateau Lanessan ($15 to $18, depending on the year) is such a wine, an Haut-Medoc with the depth of a much-pricier Pauilla. The '83 and '85 are both excellent; the '82, if you can find it, is better still. (With this wine, and all Bordeaux, steer clear of the '84s and '87s. This will take some fortitude, since retailers will try to unload these on the unwary. Don't let them, unless you wish to plummet in the esteem of your wine buff friends.)

Moving on to the $25 to $35 range, the 1983 Pavillon Rouge du Chateau Margaux ($26) is silky in the mouth, with a taste as round as a beach ball. Further, it combines impeccable pedigree with undeniable value. Pavillon Rouge is the second wine of the famous Chateau Margau, and 1983 is a superb year for the southern Medoc.

The 1985 Tignanello ($34) is a fine example of the lately-fashionable Italian vini da travloa, or table wines. If the category sounds strangely modest, even humble, blame it on the bizarre Italian laws which deny place-name status to wines that use foreign (though in some cases superior) grape varieties. Tignanello, a blend of Sangiovese and Cabernet, melds the strength of the French grape with the suppleness of the Italian, and ends up being as graceful as a gymnast.

Most serious wines are older wines, and if they are not old yet, then they had better be worth waiting for.

Step up to wines costing $50 to $60, and you are also stepping back in time, paying not only for what's in the bottle but for the years it has taken to get it ready. The 1979 Hermitage La Chapell ($50), a Rhone wine made from the muscular and sometimes rough Syrah grape, had the good sense to ride out the 1980s in a cool dark cellar, and is the more serene and balanced for having done so. Chateauneuf-du-Pape—not an area held in highest esteem by the buffs—produces several wines that stand out for their individuality. First among these is Beaucastel, whose 1978 ($50) is a heady melange tasting of leather, tobacco, roasted nuts, and, yes, barnyard—Beaucastel prides itself on using 100% organic fertilizers. This is a wine that mavens adore.

Most people will blanch at the thought of throwing 100 bucks at 750 centiliters of spoiled grape juice. However, such a transaction may also be viewed as purchasing a sip of a legend, and for those who'd like to wax extravagant on a gift of wine, I recommend the following.

Penfold's Grange Hermitage is unquestionably the greatest wine made in the Southern Hemisphere. This Australian titan is made from the Shiraz grape, aged in small oak casks, and is possibly the most concentrated wine this buff has ever tasted. The bouquet slinks out of the bottle like a genie; smells of blackcurrent and pepper lingered in my dining room for two days after the wine was gone! The 1981 is a steal at $95. Nineteen-seventy was a terrific year in Bordeaux, and a top-flight Chateau Montrose ($100) is aging far more gracefully than most of my closest friends. This is a wine that will be received with deep gratitude at Christmas and will blow the doors off any silly, giggly, pale champagne on New Year's Eve. ◆

DEWAR'S SCOTLAND

OFFICE DREAMS

Everyone fantasizes about having the perfect home office. But turning the dream into a reality isn't always so easy

Everyone has office dreams, whether they work in an organization or for themselves. Like the unspoiled lakes in Bierstadt landscapes, the offices of our fantasies have an Arcadian glow that owes nothing to fluorescent light and everything to the yearning imagination of the workbound mind. These visions spring from the movies, where offices are impossibly spacious and implausibly uncluttered, or from advertising, where (except for Excedrin ads) men and women inhabit sleek spaces as purposeful and spare as the bridge of a battleship. Like one's original concepts about marriage or government, office dreams are based on the hopeful theory that happiness, order, efficiency, and serenity are actually within our grasp if only we strive hard enough for them. And they might be, were it not for our need to inhabit them, open drawers, search frantically for that lost invoice, spill cups of coffee, fill to overflowing in-boxes and out-boxes and wastebaskets, and generally turn the ideal into the oh-too-real.

The trouble with offices is work. Work, with its infernal loose ends, overflowing files, and pastiches of Post-It Notes, is the slovenly serpent that creeps into what ought to be a serene, cerebral Eden and makes it as mundane and messy as real life. But the dream of the perfect office persists, and despite our human failings, the time may be right for making it come true.

Along with our office dreams, most of us cling to the memory of real dream offices that prove that perfect work spaces actually do exist. I was in college when I saw my dream office—Thomas Jefferson's ideal study at Monticello, with its Palladian proportions, intimate size, abundant books, and sweeping views of the estate's lawns and gardens—a revelation that has given me something to aim for, and fall short of, ever since. A woman lawyer I know longs for the Oval Office, or at least *an* oval office, not because she has presidential aspirations, but because she believes curved walls would keep her from feeling cornered by her work. Despite such grandiose yearnings, most of us take the resolutely

by Owen Edwards

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rectangular offices that come with our jobs, personalize them as well as we can, and put our dreams on permanent hold.

When the office in question is a home office—a workroom of one's own—things ought to be more satisfying. After all, you're the boss. And the chief financial officer. But the reality usually ends up just as dour as a stingy cubicle at Bottom Line Inc. Illogically, even when the work done at home is financially crucial to family finances, the home office is relegated to a place on the priorities list somewhere between the laundry room and the tool shed. In fact, tool sheds, only slightly converted, have a long history as prime office space. "I used to think that I couldn't make a decision without the smell of gasoline from the lawn mower in the air," says a self-employed financial analyst in Marin County, whose impressive stationery manages to imply a corner suite in a glass-walled high rise. Despite self-made promises to commandeer significant territory whenever a move to a new house or apartment comes, most of us end up settling for whatever meager spot is left when everyone else's territorial rights have been exercised.

Even when the work done in a home office is undeniably important—possibly even immortal—a reflexive humility tends to relegate the *doing* of that work to some overlooked corner. In the book *Self-Consciousness*, John Updike describes various outbacks—sometimes quite literally out back—in which he has labored to produce his extraordinary stories and novels: "The ▶

first year in Ipswich, I wrote in a marble-floored room at the back of a little lavender house we rented on Essex Road; one winter night, a storm blew the door open and filled my boxes of *Poorhouse Fair* manuscript with snow. In the roomier seventeenth-century house that we then bought, I worked in a small corner aerie upstairs....By late 1960, our fourth child was born, and the house was full of commotion and small emergencies that seemed to invite my participation; I was surprised when my wife suggested that she was tired of making lunch for me every day and that my presence was not really indispensable. And so I rented a room downtown, four blocks away. The beginning rent was eight dollars a week, and my frugal landlord...observing that I didn't sleep there, would turn off the radiator every night, so on winter mornings I would face a room cooled to a temperature suitable less for writing than for running in place....The room and I would slowly warm up together."

This unassuming tendency to take any available patch for a home office reflects the difference between family and corporate culture. In a company, where offices are the whole point, the more room one can take up the better—acreage is a measure of power, after all. But in a home, where a sort of de facto communism prevails (even if, as in Orwell's *Animal Farm*, some of the animals are more equal than others), the idea of co-opting what are generally considered community spaces seems distinctly bad form. One's hopeful plans for a cherished location are usually greeted with resistance by family members who invariably have plans for those choice areas that can't easily be dismissed. ("But, dad, that would make a great TV room for *all* of us.") Thus is born the home office as afterthought, gulag, Devil's Island—the place no one else wants to spend time in.

A walk-in closet is not the kind of nerve center even the most modest master of the universe would accept.

Of course, everyone with office dreams wants something different in a work room at home. An aerie, or a bunker? A center of activity or a monastic cell? Each fits somebody's requirements. It's said that Chekhov created an instant office by clearing the table after dinner and getting to work amid the clatter of dishes and the caterwauling of kids (but then, he didn't have to contend with the space needs of a word processor). Tolstoy, on the other hand, required the strictest privacy. I've waited years to find at last an office with a sweeping view of the San Francisco hills, while my next door neighbor, a writer who specializes in the higher mysteries of the computer world, blocks the same view with an opaque black shade.

Sharp UX182 fax, $949.

Some people, of course, actually manage to control the chaos of work through a combination of an efficient filing system and ceaseless vigilance, keeping their home offices as sterile and efficient as pre-op surgeries. No sooner does a stray bit of paper hit the desk than it is rounded up and whisked out of sight. Frankly, these types worry me. How they know they're getting any work done, I can't imagine. I comfort myself with the hope that their orderly ways are a compensation for utter mental disarray.

Despite all these differences, most people share the common denominator of feelings about the home office—disappointment at how much less wonderful the place is than when we had first imagined it. The living room may be a model of comfort, the kitchen a dream of artful efficiency, the bedrooms havens of sensual charm, even the garage an organizational masterwork, and yet the home office will be okay at best, and a grungy dungeon at worst. If not an after-thought, certainly a thought never quite completed.

Amazingly, even men and women whose work at home provides the lion's share of a family income look upon their offices as peripheral to the real function of the home. That shortsighted thought is often shared by other members of the family who work or go to school outside the home. It's probably why so many people who ought to be able to pursue their careers at home end up renting office space somewhere else: If they're at home, the destructive logic goes, how can they be at work?

The real problem is, if you pursue your career in a corner of the guest room or a barely converted chicken coop, how can you ▶

lieve what you're doing has the overarch-
g priority of essential business—and con-
nce everyone else? Obviously, you can't.
t the solution is simple. Don't think of
urself as a writer, a freelance financial
nner, or a graphic designer; imagine
stead that you're the CEO of a major cor-
ration, or better yet, Captain Kirk, com-
nder of the Starship Enterprise (after
, are you commander of your own enter-
ise, or what?). A walk-in closet is simply
t the kind of nerve center even the most
odest master of the universe would
cept. Change your psychic scenario: You
ve just been hired by a major corpora-
n to head a new division intended to
gain the market share the company has
en losing for several years. Work at that
a for a while, visualize it in the same
y you've been told to visualize your ten-
s backhand. Next, try to picture the office
m which your vast new power will flow.
s big, imposing, handsomely furnished,
ed with the electronic paraphernalia of
ecutive clout. It is, in other words, just
at you'd expect for your status. More to
e point, it's just what you deserve. Hold
to that feeling. Now you're ready to put
gether your office at home.

The home office has entered its high renaissance period.

If you happen to be moving into a new
use or apartment, start by selecting the
om you want, not the one nobody else
nts. After all, the kids have time on their
le, and guests can manage perfectly well
a fold-out couch in the living room.
ep in mind that in most cases home
ice expenses are tax deductible, and
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rt for your lower back and even more ▶

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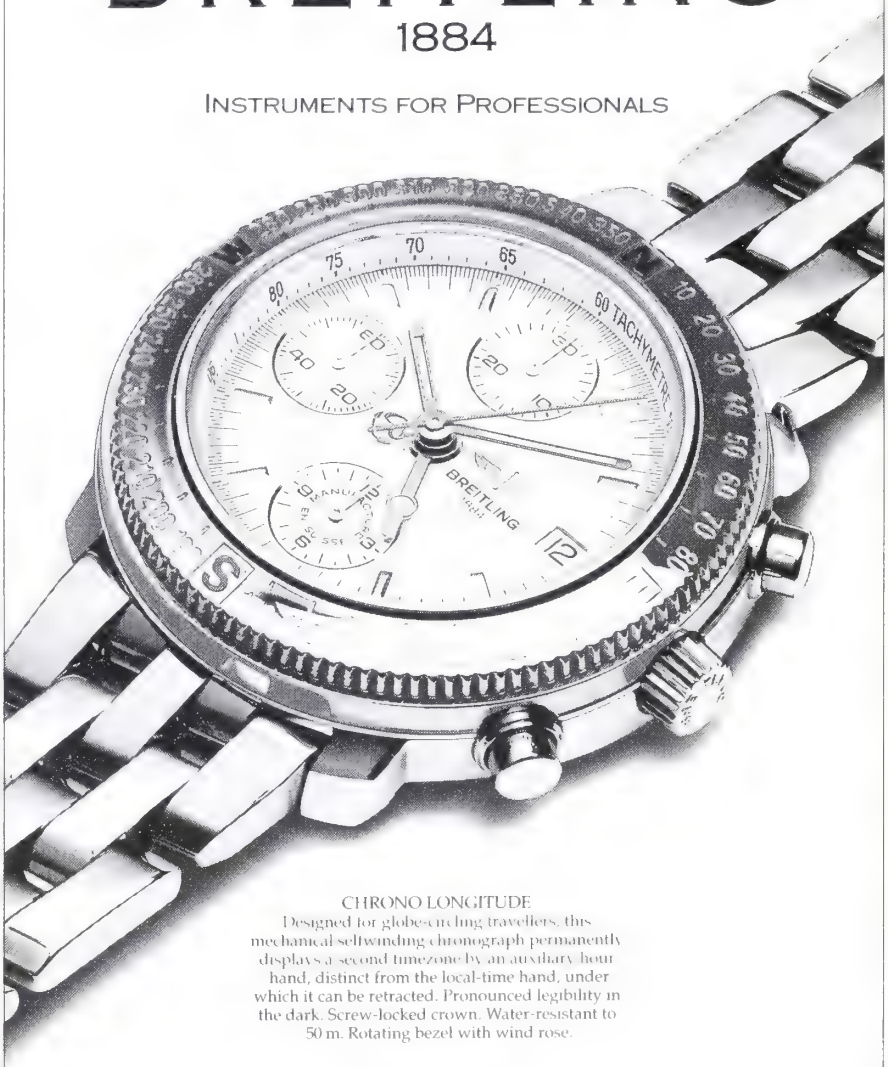

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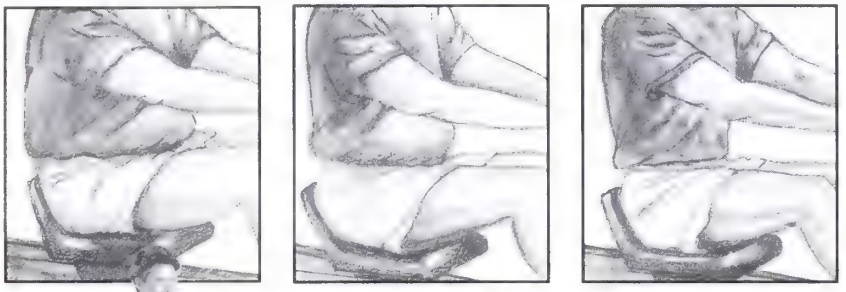

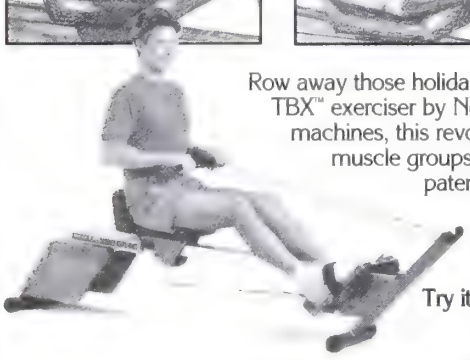

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for your ego. Some years ago, I bought what I consider to be the best office chair ever made, the Equa designed by William Stumpf and Don Chadwick for the Herman Miller Co. I chose a top-end model in black glove leather that set me back more than a thousand dollars. But since then, I figure, the physical and psychological comfort offered by the equable Equa must have been worth thousands. If only I'd been writing screenplays, the figure might be millions.

NEC UltraLite III, 4.8 lbs., $3,699.

The next most important home office choice, from an emotional standpoint, is the telephone. For some people, any phone will do, but they are misguided. After all, for most professions, the phone is still Excalibur, and to ignore it as an object is a mistake. I favor either the old-fashioned phone AT&T calls "the basic black instrument" or the sleek danMark 2, a modern variation on the same sober theme designed for GNT by Henning Andreassen. Both are business phones that look as if they really mean business, and help add heft to any office, even one with a view of the San Francisco hills. (A designer friend of mine, however, disagrees with my choice and remains faithful to her Mickey Mouse telephone, claiming that it keeps her from taking herself—and her callers—too seriously.)

No less a statement of purpose than the chair or the phone is the desk. In an executive office, exotic wood and the lack of visible work (implying that pure concept is your beat) are symbols of status. At home, pure expanse is the name of the game; the more room you have, I'm convinced, the more ambition will grow to fill it. The downside is that open space invites increased disorder, but limiting working surface is no solution, since the floor is always available for the piles of unread magazines, unpaid bills, and unfinished projects that pile up to haunt us.

Plenty of surface has become a necessity anyway, since the array of office machines has grown to imperial dimensions. So many wonderful devices are available now, in fact, that the home office has entered its high renaissance period. Powerful computers, silent laser printers, desktop copiers, fax machines, modems, and answering machines, have made it possible for a home office to be as efficient and impressive as its corporate cousin. With only a few certain notable exceptions, the companies that produce office equipment are beginning to pay attention to the aesthetics of design, so that the addition of well-chosen machinery can often have a clarifying rather than a cluttering effect.

My advice is to buy the entire arsenal of modern gadgets. First of all, once you begin using them, they make the home office a reassuring place to be. Second, you'll get respect from the grudging family members who had set their greedy little hearts on using the room for a Nintendo den. And, most important of all, with the pressing need to pay for all that expensive gear, your once humble office will become the humming hive of productivity you've always dreamed of. Or else. ✣

Fashion Plates

lockwise, from left: long-necked vase, Michelangelo Marchi, $330, Archetypype gallery, N.Y.C.; yellow bowl, Cynthia Johnson, 80, Contemporary Porcelain, N.Y.C.; stick lamp, Warren Muller, $400, Bond Street Studio, N.Y.C.; green vase, Cynthia ohnson, $80, Contemporary Porcelain; pink vessel, Olaf Stevens, $800, Contemporary Porcelain.

One-of-a-kind ceramic vessels are beginning to emerge as a hot new market for budding collectors

y A.G. Harrell Twenty years ago savvy llectors were snatching up antique majolica platters d candy dishes for a few dollars each at flea markets. ow these brilliantly-glazed earthenware pieces from ngland and Italy are highly prized and priced—not e best bet for budding collectors. More within the ach of the recession-strapped shopper (and more in gue every year) are the ceramics being turned out by tisans. "It's a hot area in collecting that's still well-iced, a great area to be buying in right now," says eslie Ferrin, a dealer based in Northampton, Mass.

The secondary (or resale) market has developed in cent years in the "art" category of ceramics. Kathleen Guzman, who heads up Christie's East in New York, insists that contemporary ceramic art be positioned in the context of contemporary paintings and sculpture rather than decorative art. "Many artists use the vessel simply for the sake of form," explains Guzman. "A great deal of what I sell is non-functional." The investment potential (we're not talking about casserole dishes here) is tremendous. "You can put together the best collection of contemporary ceramics for the cost of a secondary Impressionist painting," Guzman notes. "That won't be possible five or ten years from now. This is an area that is at the forefront of collecting."

Future resale value aside, the current interest in ▸

Fashion Plates

one-of-a-kind ceramic vessels may be a reaction to the super-slick aesthetic of the eighties, when architect-designed china became the tableware of choice among many of the urban hip. Simplicity is emerging as the design theme of the decade, and with that has come a renewed appreciation for the virtues of the crafted object, from textiles to ironworks to ceramics.

Back in the twenties, master craftsmen Gustav Stickley and William Morris waged war against popular tastes with the perfect conformity of mass-produced items. Fortunately, times have changed, and today the craft movement is once again surging ahead in both supply and demand.

The spectrum of ceramics being made today ranges from basic stoneware dishes to far-out porcelain sculptures. In between these two extremes are unique—but utilitarian—clay vessels. As the title of a traveling craft exhibition trumpets, this is art that works.

Some ceramists approach their media from the fine-arts tradition and have never thrown a pot in their lives while others never veer from the pottery tradition. Susan Eslick of San Francisco treats unadorned platters, bowls, and plates as the "canvas" for her painting. The same holds true for most practitioners of pique-assiete. Their art lies in the embellishment of surfaces with broken bits of china, tile, and glass.

In contrast, it is shape, texture, and glazing that inform the work of self-defined potters. Warren MacKenzie cites Japanese folk and Korean pottery as among his inspirations. You will find his wares for sale at a small shop next to his studio in Stillwater, Minn.

The variety of wares displayed at a craft show (there were 900 booths at last winter's American Craft Council Baltimore event) makes it the ideal place to learn about ceramics and to identify your likes and dislikes. From a casserole dish for under $80 to a $3,000 art piece, there's something for everyone. The Chicago International New Arts Forms Exposition, held every fall, is essential from an education point of view. "It's the who's who in collecting," says Guzman.

The retail options range from shops offering functional, reasonably-priced merchandise to upper-end art galleries, where ceramic works are displayed in a museum-like atmosphere and boast sale tags that start at $1,000. This disparity is rooted in the current blurring of boundaries—in ceramics and other media—between craft and high art. If it already has been deemed art, it is going to cost you a lot more. As a beginning collector, you should scout out good-quality ceramics that fire your imagination. And here's something else to keep in mind, according to the experts: Buy pieces that are representative of the body of an artist's work.

In the meantime, if you still fail to come up with something wonderful for yourself or someone else, consider a gift trip to a crafts center. Two weeks next summer in Snowmass, Colo., at one of the Anderson Art Center's ceramics workshops, will yield a pot or two and a lot of fun besides. ❖

The current interest in one-of-a-kind ceramic vessels may be a reaction to the super-slick aesthetic of the eighties.

From left: two obelisks by Mark Cecula, $90 each; and "Bauhaus Memory" vessel by Mark Cecula, $2,000. All are available at Contemporary Porcelain in N.Y.C.

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David Richmond

Pape Noel, the Cajun Santa Claus, above. New Orleans celebrates Christmas on a scale that rivals Las Vegas productions.

Every year, millions of Americans are gripped with holiday fever. But many others hit the high roads. As writer Randall Fuller reports, New Orleans is a good-natured city, with a distinct twist on the holidays.

For something a little tamer, try an English country mansion hotel. Rob Ryan writes that the best ones treat their visitors like nonpaying guests. So whether you're planning to head across the country to New Orleans, across the Atlantic ocean to England—or just across town to the in-laws'—happy travels.

Away for the Holidays

New Orleans

Only once in its long and sultry history has New Orleans actually awakened to that most American of holiday experiences—a white Christmas. Two years ago, when a freak snowstorm passed through the South in a manner somewhat reminiscent of General Sherman, the city found itself suddenly—bewilderingly—blanketed with snow. Not surprisingly, New Orleans wasn't prepared for the exigencies of a Yankee winter (municipal snowplows were scarcely equipped to handle a flurry, let alone a full-fledged blizzard). Even less surprisingly, residents of the city didn't respond to the catastrophe with the can-do practicality of their brethren to the north. Instead, bartenders fixed up extra batches of hot toddies, snowpersons were fashioned in the likeness of voodoo queen Marie Laveau, and the city threw itself a larger party than usual and waited for the exotic white stuff to melt.

Not that New Orleans has ever permitted anything so negligible as the weather to prevent it from having a good time. New Orleans has always shunned the South's putative gentility and enjoyed instead a reputation as a place for perpetual festivity. Never feeling obligated to behave like the rest of the country, New Orleans has steadfastly insisted on expressing the more repressed and celebrative undercurrents of our nature. Merely consid-

er that each February hundreds of thousands of people here take to the streets—dressed in jewelry, feathers, and very little else—for what is ostensibly a religious festival (yes, Virginia, Mardi Gras *does* mark the beginning of Lent), and you'll see why Christmas in New Orleans is observed differently than anywhere else in the world.

A melting pot of French, Spanish, and African cultures, New Orleans' streets throb during December with sultry jazz renditions of traditional French carols. On Christmas eve, bonfires are lit along the Mississippi levees—according to an old plantation legend, Papa Noel (the Cajun Santa Claus) arrived by riverboat and needed a light to find his way.

New Orleans' occasional efforts to emulate the rest of the country in matters of holiday tradition are invariably doomed to fail in such an otherworldly place. Each December, the Pelican Ice Company produces tons of artificial snow. This practice usually results in ruinously muddy lawns, but it affords New Orleans' children the pleasure of participating in snowball fights amid the bougainvillea and Spanish moss. The company also hauls a load of faux snow to the city's highest point—Monkey Hill—where from the breathtaking height of 50 feet a few intrepid locals actually attempt to ski.

An artist displays his work in Jackson Square.

For all its eccentricities, Christmas remains the biggest family holiday in in New Orleans. It's the one occasion when the allure of jazz and G-strings are forsaken for calmer, less randy pleasures. Christmas is the time when New Orleans takes account of the year's previous misconduct and makes brief observance to whatever benevolent authority allows life to proceed so entertainingly. Turkeys are baked, egg nog consumed (though both in greater quantities than most other places), and if there are the traditional holiday leftovers, so much the better. In New Orleans, having enjoyed another Christmas is reason enough to celebrate.

WHERE TO STAY

Note: The area code is 504.

Hotel Maison de Ville, 727 Rue Toulouse, 561-5858.

Le Meridien, 614 Canal Street, 525-6500.

Soniat House, 1133 Chartres Street, 522-0570.

Windsor Court, 300 Gravier Street, 523-6000.

WHERE TO EAT

Acme Oyster House, 724 Iberville, 522-5973.

Brennan's, 417 Royal Street, 525-9711.

Central Grocery, 923 Decatur Street, 523-1620.

Galatoire's, 209 Bourbon Street, 525-2021.

Devon

The whole concept of being invited to spend a weekend in the country over the holidays has been central to the notion of British society at play since the 18th century. "Of all the things the British have invented," wrote Henry James, "the most perfect, the most characteristic...is the well-appointed, well-administered, well-filled country house."

Devon, land of thatched roofs, white-washed villages, and country-house hotels.

This tradition of decamping to the country still persists. In fact, the blueprint for the great urban escape is for friends and family to gather at an ancestral estate. Unfortunately , these days most of us do not have well-heeled friends with inherited mansions. Hence the growth in popularity of the country house hotel, where city folks can play at being a well-connected member of society.

Last December, on the recommendation of a friend, I drove west to Devon. Four hours out of London I was in this land of thatched roofs. ▶

Huntsham Court treats customers like guests at a houseparty.

whitewashed villages, and warm, welcoming pubs. After only a half-dozen false turns, I swept up the drive to the wonderfully brooding Gothic mass of Huntsham Court.

As I stepped out into the hallway of Huntsham, I knew at once that this place did not play by the normal rules. For a start there was none of the usual bustle of concierges, receptionists, and bell-boys. In fact, there was no staff at all. The only sounds were the crackle of a well-fed log fire and, from somewhere behind closed doors, that satisfying thunk of snooker balls making contact. "Hi," said a female voice from behind, the American accent a shock in deepest Devon. Perplexed by the lack of a form to fill in or register to sign, I could only mutter, "Thanks. You must be the proprietor."

"Good grief, no. I'm Kathy, a guest like you. Let me show you around." It was then I knew that, whatever the technique of transforming hotel into home-away-from-home, Andrea and Mogens Bolwig have perfected it.

There are no locks on the room doors, no phones, and no TVs. The snooker room, lobby, and library are huge, yet full of welcoming nooks and crannies, and all meals are communal along one huge medieval-banquet-style table.

The food is excellent, and you don't have to pay for your drinks. Well, not immediately: There is an honor book in the bar into which you catalogue your consumption as the evening progresses. And progress it will, well into the early hours, with host and hostess joining in, until that line between paying guest and friend starts to blur. Along with everything else.

Although the hotel will arrange shooting and riding and fishing, in truth the environment acts as a benign sedative, where indolence becomes the order of the day. You might stir for a stroll in the grounds, a game of snooker, or a read in the library. Then suddenly: My gosh, is it time for afternoon tea already?

When it came time to leave, Devon was blanketed with snow, while in the hall behind me the Christmas baubles glinted from the log fire. I looked at Andrea and she just shrugged. "Well, you can always stay an extra night," she said. But I already knew that. ❖

WHERE TO STAY:

Note: The country code is 011-44

Burgh Island, Bigbury-on-Sea, Devon (548-810243).

Field Head House, Outgate, Hawkshead, Cumbria (9666-240).

Huntsham Court, Huntsham, near Bampton, Devon (3986-365).

Kinnaird Estate, Dunkeld, Perthshire, Scotland (79-682-440).

Llangoed Hall, Llyswen, Brecon, Powys, Wales (874-754525).

Maiden Newton, Dorchester, Dorset, England (300-20336).

Stapleford Park, Stapleford, Melton Mowbray, England (057284-522).

Shopping Directory

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Breitling

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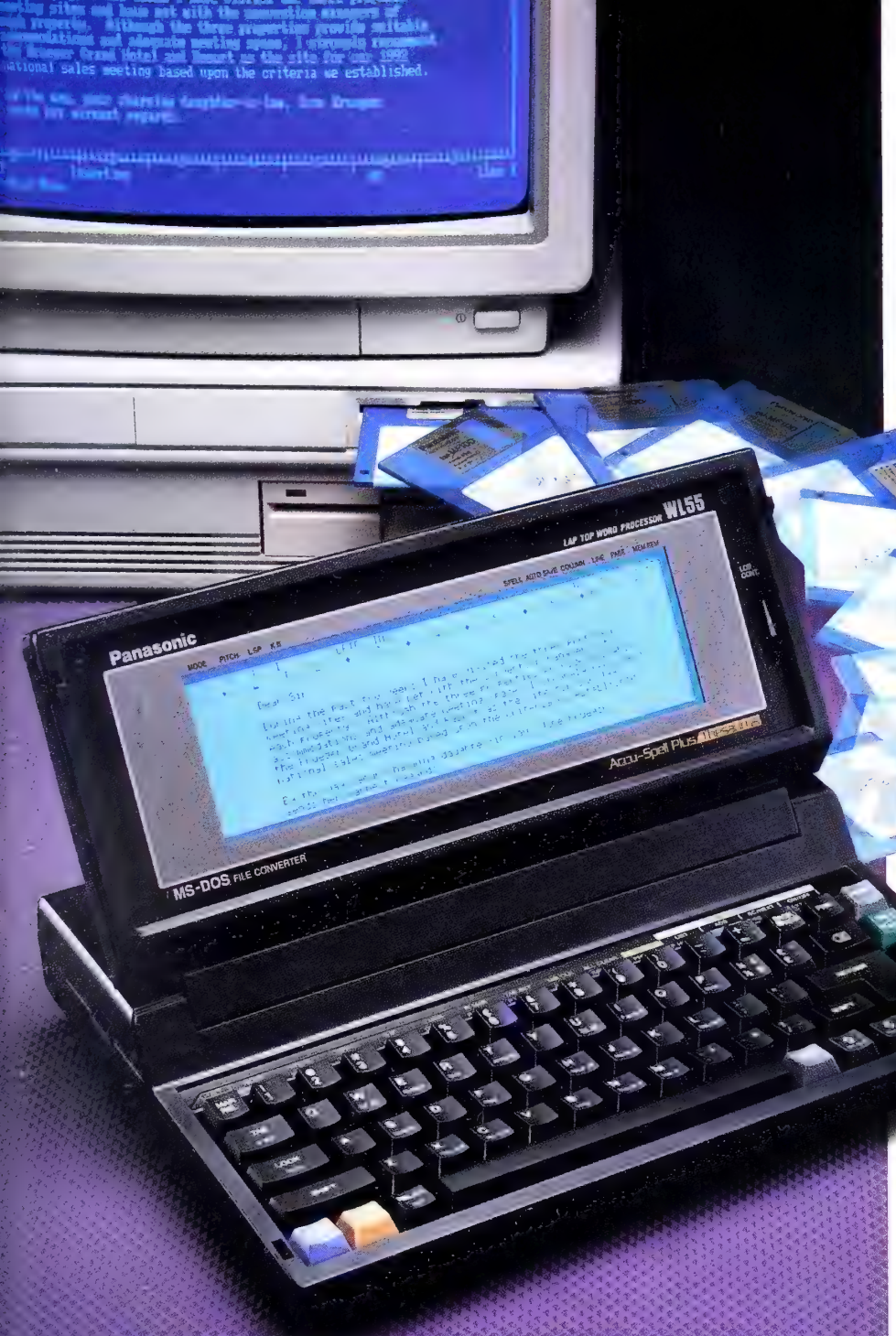

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RATEGIES

DESPITE THE FACE-LIFT, AVON IS SAGGING

mes Preston has shed a load of debt, but sales are still a mess

Ever since James E. Preston took over as chairman of Avon Products Inc. three years ago, one unwelme visitor after another has been ringg his doorbell. Preston has had to fend hostile overtures from Irwin L. Japs, Amway, and, most recently, a New rk investment group called Chartwell sociates. In April, the beauty-aids puryor ended its two-year takeover battle th Chartwell after boosting its divind 40% and declaring a special $3-aare payout for investors. Preston, it emed, could finally breathe easily.

Well, not quite. True, Avon is no longbeing hounded. But it's hard to paint pretty face on its results. The U. S. nomic downturn is hammering its doestic door-to-door business, and Pres is having trouble keeping turnover es among his legion of sales represenives down to reasonable levels. These ner times have also hurt Avon's rgio and Red lines of luxury fraances sold in department stores.

ALLER WORLD. More troubling ll is the slowdown in Avon's inrnational operations, which repsent 55% of total sales. Avon w operates in over 100 counes, and its far-flung activities re to have been a buffer against omy times at home. But results key markets such as Brazil d Japan are off this year—and overall growth is sluggish.

This isn't the kind of year Preston had hoped for. Now that Avon isn't spending millions to keep raiders at bay, analysts were looking for head-turning results. Unfortunately for Avon, its net earnings were off 60% for the first nine months of 1991, to $43.1 million on $2.46 billion in sales. True, without a $75 million third-quarter charge to write down the value of securities Avon received from the sale of assets in 1987 and 1988, income from continuing operations would have grown 10%, to $118.1 million. Despite the sluggish economy, Preston is upbeat about the crucial fourth quarter, which typically accounts for 45% to 50% of total earnings. But the chairman recently warned analysts that Avon's 1991 results will be at the lower range of Wall Street earnings estimates—perhaps around $210 million, or up only 8% from last year.

Preston, 58, is now working hard to lend some oomph to sales through such measures as direct mail. Since last spring, some Avon reps have supplied the company with names of potential customers, who are then mailed catalogs. So far, about 11% of customers have responded to the personalized campaign, well above the average 3% response rate for direct-mail solicitations.

Preston thinks direct mail will account for $300 million to $500 million in sales within three to five years. Avon also has a toll-free number for telephone orders and will even take orders by fax. To get the word out on all of these changes, Preston plans to boost Avon's advertising budget by 50%, to $11 million, next year. "Avon is fundamentally a different business," says Preston, a 27-year veteran who started out in sales.

HOUSECLEANING. Avon has certainly undergone some big changes since Preston's arrival. With an eye to returning the company to its traditional emphasis on cosmetics, fragrances, and toiletries, Preston sold off the company's holdings in health care and retirement homes. The housecleaning was painful: Avon posted a $404.5 million loss in 1988, thanks to various write-downs.

With the help of Chief Financial Officer Edward J. Robinson, who was recruited from RJR Nabisco Brands Inc., Preston has also tidied up the company's balance sheet. Avon's once staggering debt load of $1.13 billion, which in 1988 represented 82.5%

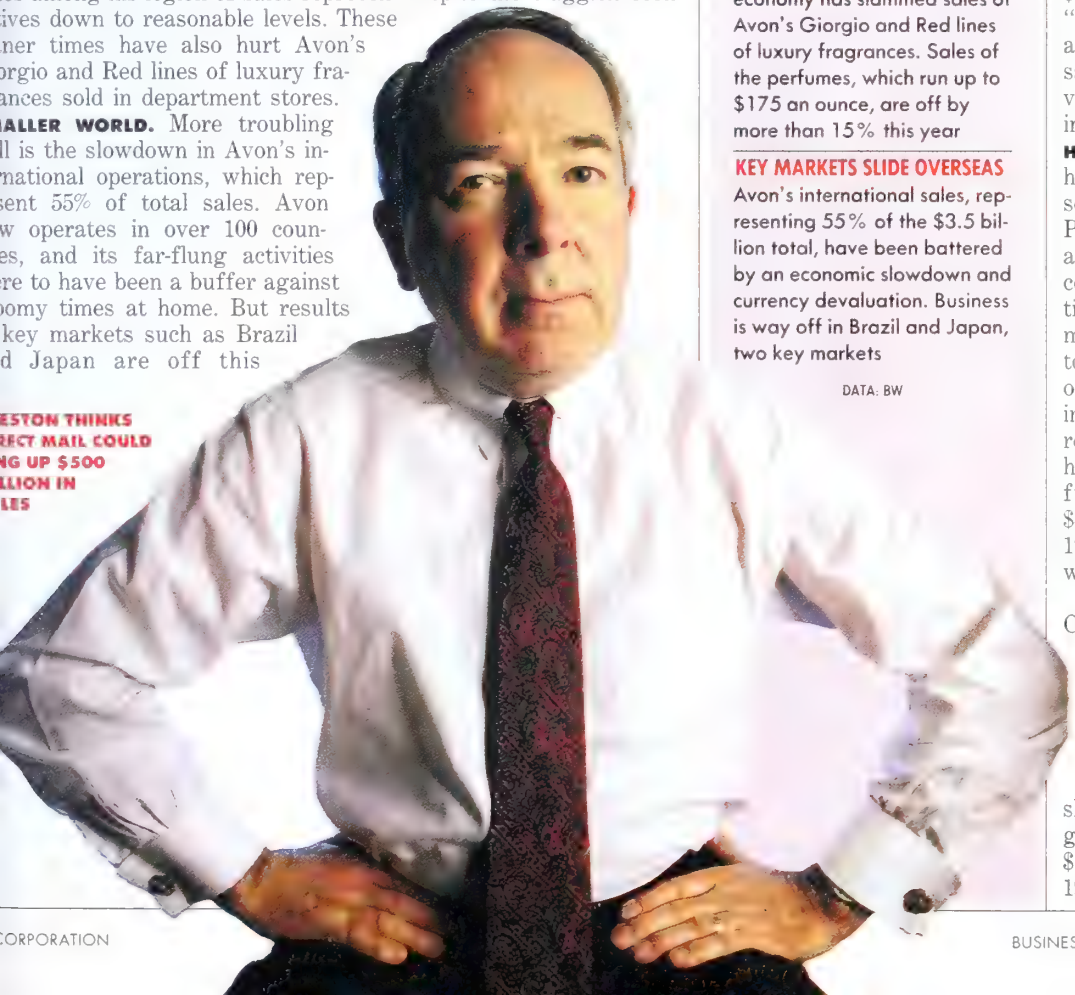
TROUBLES CALLING AT AVON

SALES ARE SLUGGISH AT HOME Avon's U.S. door-to-door sales, now at about $1.4 billion, have barely budged during the last three years. Worse, profit margins are being squeezed by price discounting

CONSUMERS AVOID FANCY FRAGRANCES The wobbly economy has slammed sales of Avon's Giorgio and Red lines of luxury fragrances. Sales of the perfumes, which run up to $175 an ounce, are off by more than 15% this year

KEY MARKETS SLIDE OVERSEAS Avon's international sales, representing 55% of the $3.5 billion total, have been battered by an economic slowdown and currency devaluation. Business is way off in Brazil and Japan, two key markets

DATA: BW



ESTON THINKS RECT MAIL COULD NG UP $500 LLION IN LES

SHONNA VALLA

of total capital, will be pared down to about $400 million, or 63.5%, by year's end through asset sales and savings from layoffs and better inventory management. Even former detractors now credit Preston with bringing more focus to Avon. "This company is really very seriously concentrating on its core businesses," says M. Anthony Fisher, a New York real estate developer who won a board seat during Chartwell's unsuccessful attempt to take over Avon.

But Avon still has plenty more sprucing up to do. The company's U.S. beauty business, which accounts for 40% of sales, has been flat since 1989, compared with the 5%-to-7% annual growth for the industry as a whole. So Preston has whipped out his markdown pen. Prices on such items as nail enamel and shampoo have been discounted by up to 75%. Preston is also taking Avon's Giorgio and Red scents to new foreign markets to offset the downturn at home. But the price cuts and the push into new markets are pinching margins, which will fall this year to 14.1%, pretax, from 15.4% last year figures Merrill Lynch.

Preston is also trying to do more to retain Avon's sales representatives, some of whose positions now have a 250% annual turnover rate. Under a new program now being tried out in California and 25 other states, reps can earn up to 21% in bonuses on the sales of new reps they recruit.

OUT OF STOCK. Not all of the sales force are happy with the Preston regime, however—and the reps are an all-important constituency at Avon. "We're the backbone of this company," says one disgruntled rep. Avon says it is committed to its reps and has no intention of supplanting them with direct mail. But a group of Avon salespeople in West Virginia recently fired off an angry letter to Avon President E. V. Goings Jr. complaining that merchandise they had ordered came in weeks overdue. Preston concedes that some Avon products do arrive late.

A bigger headache, though, is overseas. For years, foreign sales grew at an average 16% annual clip. But this year, a recession in Brazil and a flagging Japanese operation have hurt. International sales were up only 5% in the third quarter, and pretax operating profits fell 4%.

All the same, investors are hardly hitting the panic button. Avon's stock has appreciated more than 40%, to around 40, since the start of the year. And analysts believe Preston's makeover of Avon should finally start to pay off come 1992. If so, then maybe Preston can finally stop worrying about who might turn up on his doorstep.

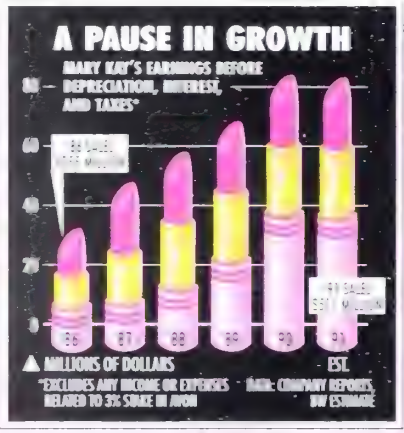
By Bruce Hage in New York

MARY KAY IS SINGING *I FEEL PRETTY*

Every year, Mary Kay Cosmetics Inc. gives more than 300 of its top salespeople a small token of appreciation: the use of a a pink Cadillac for two years. That has always summed up the flamboyant spirit of the cosmetics company founded by Mary Kay Ash in 1963. But not long ago, a Pinto might have been a more apt symbol. By the mid-1980s, Mary Kay found it tough to recruit women as sales representatives because of the better-paying jobs open to them. And with more women working, the remaining reps had trouble reaching new buyers. Sales and earnings tumbled.

But look at Mary Kay now. Even as rival Avon Products Inc. is stumbling, the company seems to have regained its footing. The two competitors have an unusual relationship. Mary Kay owns a 3% stake in Avon—and was part of a failed takeover bid launched by Chartwell Associates two years ago. But these days, Mary Kay is more concerned with making its own business grow than with snatching away someone else's.

TIGHT MARKET. Under the leadership of 48-year-old Richard R. Rogers, son of Chairman Emeritus Ash, the company has used shrewd marketing, better sales incentives, and new products to get back on track. Since 1985, when management engineered a $450 million leveraged buyout, sales have risen a stunning 96%, to $487 million. And Mary Kay has more than doubled cash flow—a blessing considering its still-hefty $347 million in debt.



Cash flow will be flat this year, thanks largely to spending on a $3 million telephone ordering system. But few are complaining. "They've done remarkably well since their buyout," says John E. Schlifske, associate director of Northwestern Mutual Life Insurance Co., a Mary Kay bondholder.

By offering sweeter commissions and bonuses, Mary Kay has replenished the ranks of its sales force with more part-timers. Nearly 70% of the sales force now have other jobs, vs. 33% before the buyout. Mary Kay now boasts some 220,000 salespeople, up more than 50% since 1985.

All those salespeople will be battling in a tighter market, however, with the nation's cosmetics business expected to grow by little better than the rate of inflation in coming years. But Richard C. Bartlett, president of Mary Kay Cosmetics, hopes that with its more personalized service and lower prices, Mary Kay can steal business away from department stores, many of which are reeling from heavy debt pressure.

All the same, Mary Kay's best growth prospects are overseas, where it has a foothold in 15 countries. The company aims to boost foreign sales from 11% to 50% within 10 years. To do so, Mary Kay is looking to acquire a manufacturing plant in Europe and move its forces into Japan.

Rival Avon, which gets 55% of its sales from overseas, scoffs at Mary Kay's expansion plans. "They have been trying to do that for the last 15 years," says CEO James E. Preston. Maybe. But given the way things are going for Mary Kay, Avon had better keep an eye on its rearview mirror: A pink Caddy might be gaining on it.

By Wendy Zellner in Dallas

BETTER PAY, LESS TURNOVER: CONDUCTING A MAKEUP CLASS

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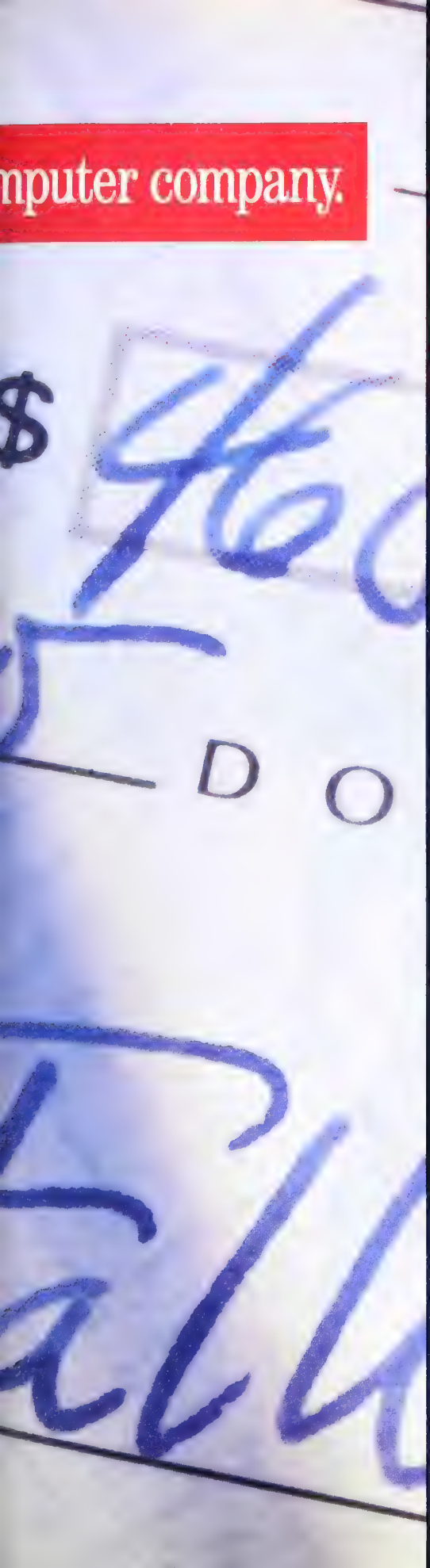

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PRO FOOTBALL

CANADIAN FOOTBALL LOOKS FOR DAYLIGHT

The money-losing league mulls a risky expansion into the U.S.

Bruce McNall, the Los Angeles coin dealer who's paying rookie Raghib "Rocket" Ismail a record $18 million over four years to play in the Canadian Football League, couldn't have scripted it any better. On Nov. 17, before a near-capacity Toronto SkyDome crowd of 50,380, the Rocket gathered in a punt, then darted and danced his way 75 yards downfield for a touchdown. The Rocket's performance helped propel McNall's Toronto Argonauts to a 42-3 blowout of the Winnipeg Blue Bombers and a berth in the Grey Cup—the CFL's Super Bowl—on Nov. 24.

In his first year in Canada, the Rocket has done more than help the Argos to a 14-5 record. Just as McNall had hoped when he lured the former Notre Dame star up north, Ismail has fired interest in the CFL. Average attendance at Argo home games jumped some 15,000, to 36,000, this season. And the CFL's long-anemic TV ratings are up by as much as 40%.

RESCUE MISSIONS. Even with the Rocket, though, the CFL remains one of the shakiest pro leagues in North America. "Every team is losing money this year," moans Murray Pezim, the flamboyant Vancouver mining executive who owns the British Columbia Lions. Pezim expects to lose more than $1 million this year, even though Lions' quarterback Doug Flutie, the 1984 Heisman Trophy winner, has boosted home attendance by 10,000 a game. Two of the eight CFL teams—Calgary and Ottawa—were just rescued from insolvency by new owners.

To get on firmer ground, CFL owners are now considering the most radical gamble in their history: expanding into the U. S. A committee headed by Canadian comedian John Candy, an Argo co-owner, is studying the question, and some sort of U. S. foray seems likely by the 1993 season. Commissioner J. Donald Crump says Portland, Ore., Detroit, Florida, and even Fargo, N. D., are among the sites under consideration.

The U. S. presents an almost irresistible lure. Since the Montreal Alouettes folded in 1987, the CFL has been locked into the tiny, English-speaking Canadian market. "We're running a whole league for 17 million people," says Crump, the fourth CFL commish in 10 years.

Small markets don't make for fat revenues. This year the CFL sold its TV rights to the Canadian Broadcasting Corp. for a mere $1 million and netted several million more from ad sales. Much of that money went to keep the Ottawa Rough Riders afloat. But even in a good year, CFL teams count on no more than $1 million or so from TV. In contrast, each National Football League team will get $28 million in TV loot this year. That's roughly equal to the CFL's total revenue.

BRIGHT SPOT: ROCKET ISMAIL IS BOOSTING TORONTO ATTENDANCE

Those numbers are at the heart of the league's dilemma. While the CFL needs marquee players to generate fan interest, it can't compete with NFL salaries. The average CFL player earns a little more than $50,000, about one-eighth the NFL average. And while McNall outbids the NFL for the Rocket, few believe that he can afford to keep the star in Canada beyond his four-year contract, if that long. Indeed, Candy hinted in a recent newspaper interview that Ismail might soon jump to the Los Angeles Raiders, who own his NFL signing rights.

Ismail would certainly be more visible in the U. S. if he went with the Raiders. His presence in Toronto hasn't won him many stateside viewers, who can watch the Rocket only on the Prime Network, a cable sports outfit, and usually only on tape delay. Prime admits it wasn't the CFL's first choice. "By the time the league got to us, a lot of other networks had said no," admits Tony Acone, assistant to the chairman of Prime Ticket, Prime Network's parent.

'REAL BORING.' The minimal TV exposure is a source of great frustration to CFL owners, who think their brand of football has great fan appeal. The CFL game, which features 3 downs, 12 men on a side, and a wider and longer field, is designed for passing and scoring. By comparison, "the NFL is real boring," says Phil Kershaw, president of the Saskatchewan Roughriders.

The CFL is also a heck of a lot cheaper. "Who wants to buy an NFL team [for $100 million or more] when you can have a CFL team for $10 million or less?" asks Larry Ryckman, the Calgary businessman who in October bought his city's Stampeders team. "Besides, the upside potential is enormous."

Ryckman is an optimist, but then, CFL owners have to be. Their current season runs from July through November, meaning the league goes head-to-head against baseball and college football, not to mention the NFL. And if the league's U. S. reception so far is an indication of the future, expansion could lead it into serious trouble.

That's why some CFL supporters argue that the league's best option is to forget the U. S. and learn to live within its smaller budget up north. That's not what McNall had in mind when he spent big bucks to bring the Rocket to Canada, but it may be the CFL's best bet for long-term survival.

By William C. Symonds in Toronto

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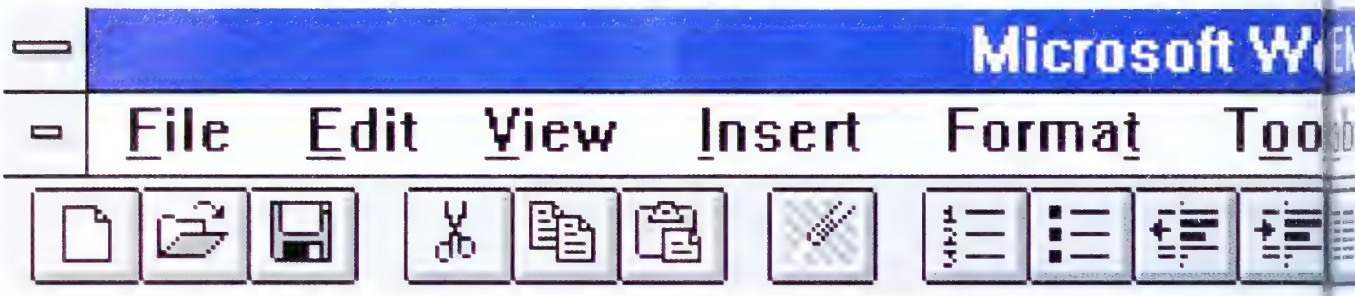

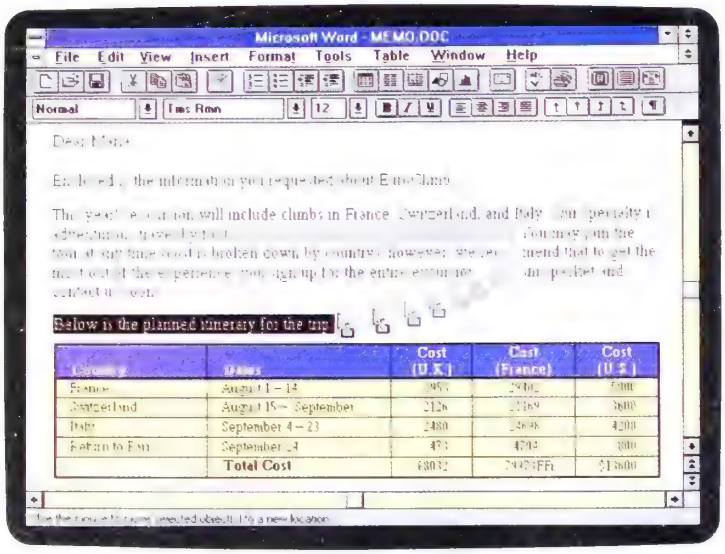

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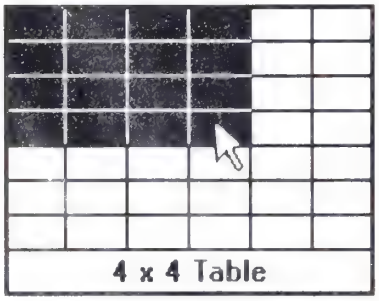

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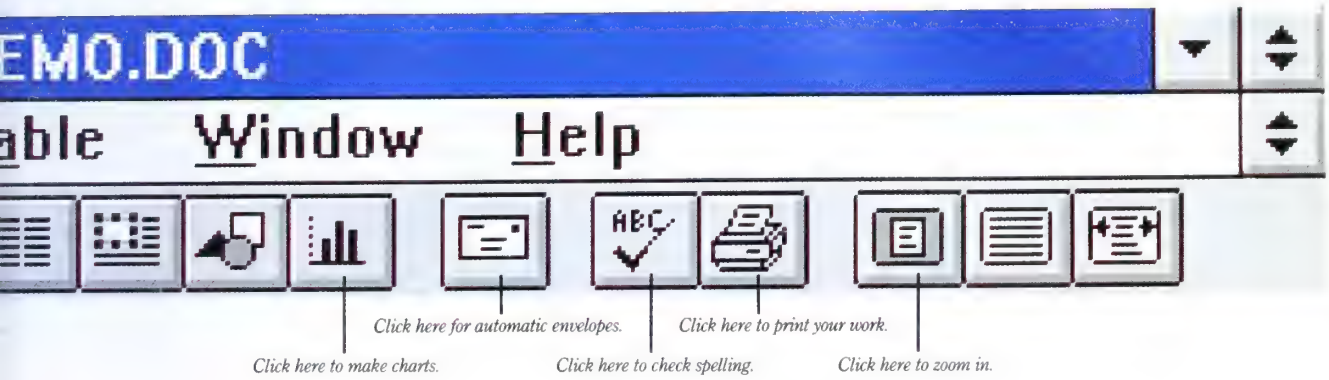

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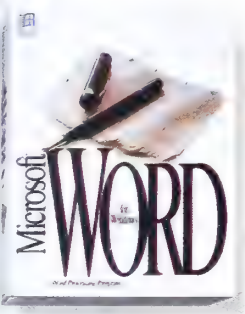

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IS IT TIME TO REINVENT THE PATENT SYSTEM?

Critics say costly court fights and an outmoded, overwhelmed bureaucracy are hurting U.S. business

In 1990, a little-known inventor named Gilbert P. Hyatt stunned the semiconductor industry when he won a 20-year battle for the patent on the basic microprocessor. On Nov. 6, Hyatt announced a licensing deal with North American Philips Corp., a unit of the Dutch electronics giant. Philips paid Hyatt an undisclosed cash sum in exchange for the rights to his basic microprocessor patent and 22 others. Its expectation: to earn more than $100 million by exploiting Hyatt's patent portfolio for the next 17 years.

It's the kind of Cinderella story Americans love—the obscure, lone inventor prevailing over industry giants. But Hyatt's tale isn't so clear-cut. It has come to symbolize a patent system that many companies now believe needs to be revamped. Critics charge that the patent system is bogging down in litigation and confusion over patent rights and that it can be marred by long delays in granting patents, such as Hyatt's, that can turn an entire industry on its head.

In the meantime, some U.S. executives worry that foreign competitors are gaining an edge by winning more and more patents, which the companies can then use to try to establish dominance in a world market. "The interest in gaining intellectual property rights is increasing at an unbelievable pace," says James W. Gillman, general patent counsel for Motorola Inc., noting that Japanese companies have sharply increased their patent filings in Japan over the past five years. "We view this as a competitive threat."

'MOCKERY.' Ironically, changes in U.S. patent laws a decade ago are a partial cause for the current situation. Worried about the country's waning technological edge, Congress established the U.S. Court of Appeals for the Federal Circuit to hear all patent appeals. In case after case, the court ruled in favor of patent holders. Other courts began handing out larger damage awards and sometimes shut down competitors with injunctions. This has strengthened the rights of patent holders and made patents—even marginal ones—more valuable.

Yet the measures may now be eroding U.S. competitiveness rather than strengthening it. Patent litigation has soared 52% from 1980 to 1990, diverting management's attention from more productive pursuits. Over the same period the number of patents issued has ballooned by 46% as the pace of innovation quickens and as companies and inventors try to protect their inventions and win potentially lucrative licenses. "There was a time when we used to feel that each patent that was filed did make a contribution," says Robert W. Kastenmeier, former head of the subcommittee of the House Judiciary Committee that

ersees intellectual property. "But w, the overriding push by competitors protect themselves has made a mock- of the whole system."

Some U. S. managers worry that over- as competitors will use U. S. patent against them. Foreign companies collecting almost half of all new S. patents and boosting their percent- es every year (chart, page 114). The gest risk is that a foreign company l exploit the willingness of U. S. lges to grant injunctions in patent ses—and shut down an American com- itor. That almost happened last year en a judge granted Hitachi Ltd. and otorola Inc. injunctions, barring both m selling particular microprocessors. ey settled. But the experience was so- ring for Motorola. "The Japanese are ilding up their patent stockpile," says w York patent lawyer Steven D. Glaz- "We keep dragging them into court, etty soon they'll learn from us."

CRET SYSTEM. Pressure is building to form the U. S. patent system. A Com- rce Dept. advisory commission is now dying the system to figure out where provements can be made. Congress, wing to industry concerns, is seeking clear up confusion over biotechnology d software patents. Some companies nt to create a new method to protect uable industrial designs that are not tentable now. Defenders concede the S. system needs tinkering, but they its broad coverage and strong pro- tions remain a model. "We have a stem that's better than anyone else," ys Lee J. Schroeder, an attorney with e U. S. Patent & Trademark Office. here's not a great difference in the am done in the U. S., Japan, or Eu- pe. But we are quicker."

The U. S. system is unique in another y respect—its "first-to-invent" stan- rd. Under U. S. law, a patent is grant- to the person who can prove he had e idea first, no matter when he filed the patent. And patent applications e secret until the patent is granted, a ocess that takes 18 months on average t can take years. The system aims to ike a balance between innovation and mpetition: Patent owners get a 17-year nopoly on inventions but must share eir work with the public.

Europe and Japan use the more expe- nt "first-to-file" system and make tent applications public 18 months af- they are filed. The U. S. system pro- ts lone inventors who lack the re- urces to keep up a stream of patent plications merely to show they were st. But some critics say it stifles com- tition and leads to redundant research. "Our problem seems to be that we n't have any trouble with inventing t with pushing the technology for- rd," says Schroeder. "And to some

JAPAN'S SOUPED-UP PATENT SYSTEM COULD SCALD U.S. COMPANIES

For years, American companies have complained to Washington about inadequate patent protection in Japan. The standard litany: Patent applications face inordinate delays, products and technologies are copied, and when it all winds up in court, litigation drags on for decades.

Responding to such complaints, Japan is putting the final touches on one of the world's most sophisticated electronic patent systems. Costing nearly $1 billion, the computer system allows instant filing of applications and quick retrieval of any one of 30 million patent filings. Japanese officials say the new system will shave a year off the current 36-month average wait on patent approval by 1995.

THE U.S. PATENT OFFICE CONDUCTS SEARCHES THE OLD-FASHIONED WAY

JAPAN USES OPTICAL-DISK EQUIPMENT TO STORE ELECTRONIC APPLICATIONS

Technology alone, unfortunately, can't solve U. S.-Japan patent friction. In fact, says one U. S. government official, "it could make things worse." The problems stem from drastically different approaches to patents. Japanese patents tend to be narrowly focused on specific improvements to technologies, unlike the broad-based U. S. approach. For example, when IBM scientists in Zurich discovered warm-temperature superconductors in 1986, Japanese companies duplicated the results. Within a year, they flooded the patent office with hundreds of related applications. If the technology ever bears commercial fruit, these patents could tie up U. S. companies trying to export to Japan.

NIGHTMARE. From Japan's perspective, "the system helps promote new manufacturing technology," says John Stern, an official at the American Electronics Assn.'s Tokyo office. But to American companies whose patent applications languish while the technology described in the application is copied or improved upon, the system has been a nightmare. A U. S. company whose invention is copied and patented in Japan could end up having to get a license covering its own invention.

Computerization, Americans fear, will aggravate patent flooding while doing little to speed up the approval process. Where typed applications used to be delivered in a box, 95% of new applications today are sent over phone lines or on computer disks. "There's no way electronic filing will produce an expedited patent," says Bradford R. Huther, a U. S. patent office official.

Even so, Japanese officials are trying to cut delays in approving patents filed by U. S. companies. The patent office has added 60 examiners in the past two years. Says its head of general administration, Kazuhiko Otsuka: "Machines can't replace human examiners."

FAIRER? Some American executives see evidence that the Japanese system is becoming fairer. Texas Instruments Inc. fought for 29 years, until 1989, to protect basic designs on integrated circuits. Today, TI is back in court, fighting a new attempt by Fujitsu Ltd. to have its patent revoked. But now, TI managers are sure they can get a victory more quickly. Since 1986, says Mel Sharp, a former TI patent counsel who guided the company's three-decade effort, "TI has been given very fair treatment by the patent office and by the Japanese system."

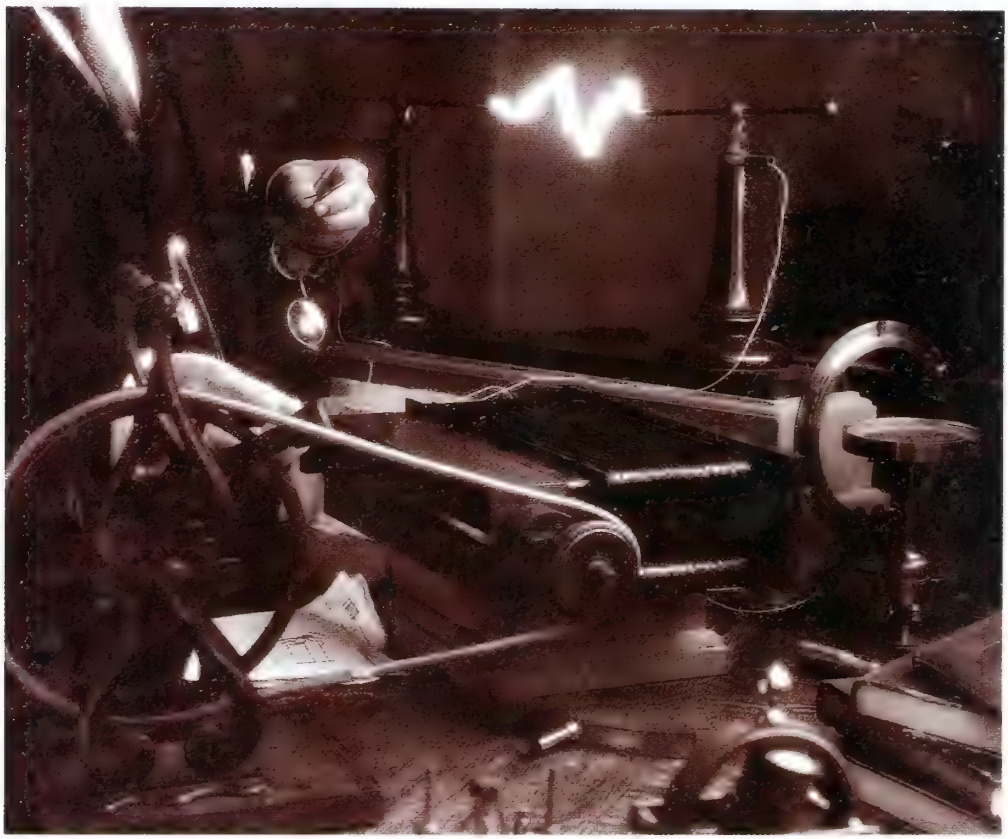
U. S. officials also hailed a recent preliminary injunction by the Osaka District Court favoring Genentech Inc. over rival Toyobo Co. The court ruled Toyobo's version of a heart-attack drug infringed Genentech's patents—and bailiffs seized inventories of the drug at Toyobo's plant.

Some U. S. executives fear that these are exceptions. Now, Japan's engineering companies are zipping electronic applications into Tokyo's high-tech patent fortress. As the race to file new patents continues, inevitably, so will U. S.-Japan patent woes.

By Neil Gross in Tokyo, with John Carey in Washington

SIEMENS

1866. That was then.



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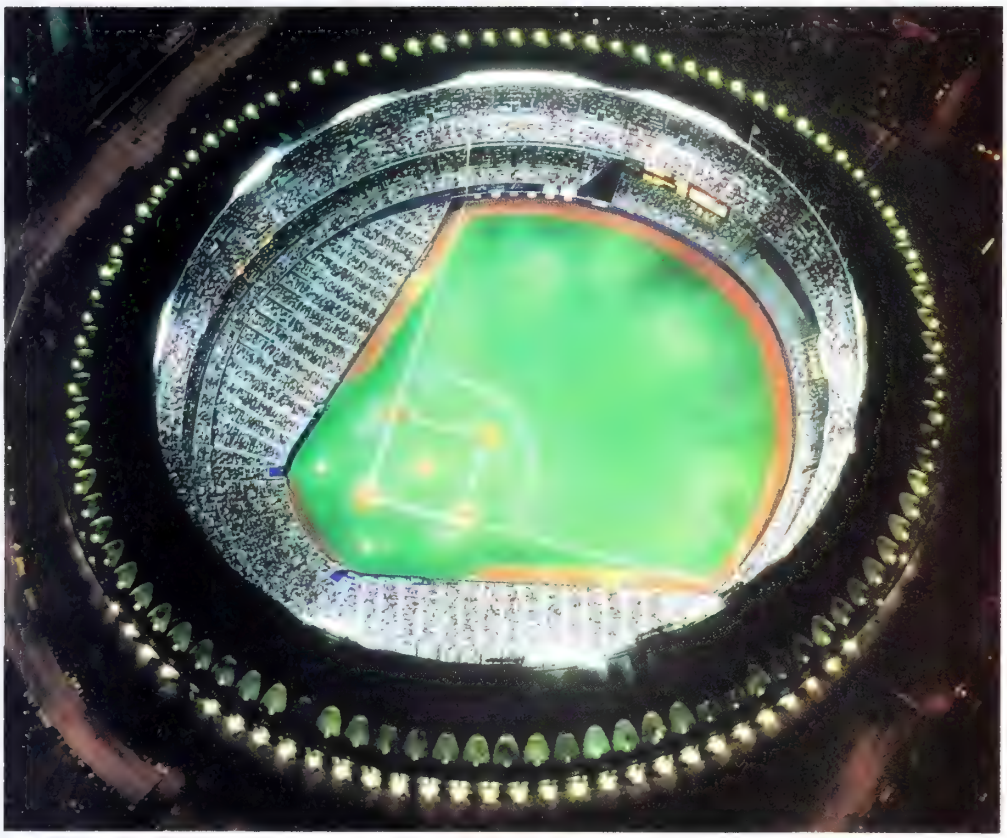

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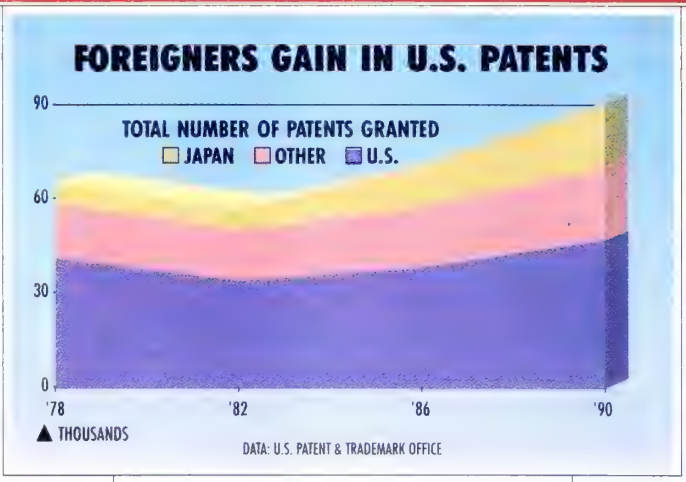
extent, this may be based on the idea that in the U. S. a person can claim to be the first inventor." The reason, Schroeder explains, is that the inventor in the U. S. may be tempted to license the patent or to take his time developing a product, knowing the system will support him later. But the first-to-file system spurs innovators to file for patents faster, speeding the progression from idea to finished product.



COSTLY QUESTS. Another reason is that companies may be spending lots of energy just trying to figure out who was first. Many biotech companies are chasing a class of molecules called colony-stimulating factors (CSF) that can increase the count of certain blood cells. Immunex Corp. already has a product called GM-CSF on the market. But because five companies, including Immunex, were working on the same molecules in 1984 and 1985, they have been involved for years in "interference" proceedings at the patent office designed to sort out which inventor was first. "What's happening in biotechnology is that the examiners are incapable of distinguishing between conflicting broad claims," charges Scott Hallquist, Immunex' chief patent counsel. He says the companies have each spent at least $2 million in these proceedings so far.

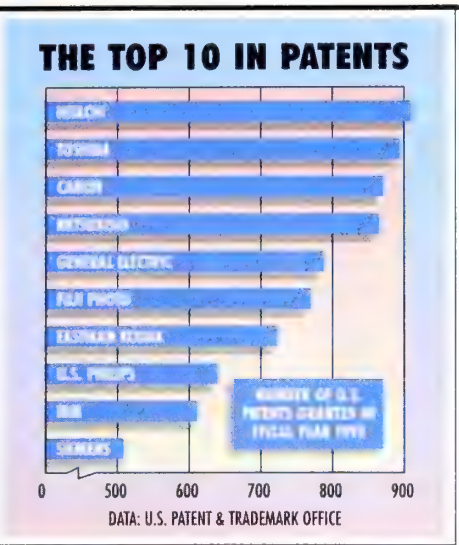
Legal bills are only part of the expense. Drug companies may be sinking millions of dollars into R&D yet still not know their patent position. Genetics Institute Inc. in Cambridge, Mass., bet heavily on winning a patent war—and lost. In 1987, GI got a patent on a purified human form of erythropoietin (EPO), a protein that stimulates red-blood-cell production. Later the same year Amgen Inc. in Thousand Oaks, Calif., got a patent on the genetically engineered version. EPO royalties were going to turn GI profitable in the second quarter this year, ending 11 years of losses. But after a four-year battle, the patent appeals court last spring sided with Amgen. The ruling forced GI to stop making EPO in the U. S. GI's stock plummeted on the news, stalling its ability to raise new capital. In September, GI sold a 60% stake in itself to American Home Products Corp.

Companies with huge patent portfolios are now more aggressive than ever about enforcing them. Since 1986, Texas Instruments Inc. has received $911 million in royalties by going after chip and computer rivals on various fronts. For the past two years, TI has generated more profit on nearly $300 million in royalties from enforcing patents than from its basic business operations.

RAY VELLA/BW

Companies such as TI are criticized for elying on patent royalties rather than roducing new products. "TI would be etter off spending its energies fixing eir product line," says Wilfred J. Corgan, CEO of LSI Logic Corp., in Milpitas, alif., one of five semiconductor makers ued by TI for infringement. TI denies it ses patents as a crutch. "If companies re using our intellectual property for ree, certainly they're better off if they an continue to use it for free," says ichard J. Agnich, TI's general counsel. But we would like them to pay."

NDERSTAFFED. Some of the blame for ne contention and the confusion can be id at the doorstep of the U. S. Patent & rademark Office. Since the first patent as awarded 201 years ago, the patent ffice has granted more than 5 million atents. The office has been plagued ith setbacks in its attempt to replace s antiquated shoe-box-sized files with a phisticated computer system, although cent studies show it is now on track. Gerald Goldberg, chief of the patent ffice's computer-related branch, says e could do a better job with more reurces. His staff of 185 examiners hanes about 10,000 pending patents—without a comprehensive computer data ase. "It's very difficult for us to say if rtain software is new or old," he says.



In contrast, the European Patent Office's computerized system verifies instantly if a patent application has been filed for any invention almost anywhere on the Continent. Japan just installed a $1 billion computer system to speed patent filings (box, page 111).

Despite flaws, the U. S. patent system has strong defenders. Many domestic companies favor the first-to-invent system because it gives them an edge. A U. S. patent cannot be rejected or overturned because someone shows up claiming to have invented it first outside the U. S. "The U. S. system is not functioning improperly or ineffectually," says Patent Commissioner Harry F. Manbeck Jr. "We wouldn't make any changes were it not necessary to compromise."

The nature of those compromises is a key part of the drive for patent reform. The World Intellectual Property Organization and trade negotiators are working to "harmonize" the world's patent laws. The U. S. patent office and many American companies now appear willing to switch to first-to-file and end the secrecy of patent applications in exchange for broader protection for new drugs and faster examinations elsewhere.

That would be a good start. Making the world's patent laws more uniform will help companies work in all markets. For the U. S., first-to-file and disclosure will bring more certainty to the patent system and get ideas into the public domain faster. And that may encourage U. S. companies to become more aggressive in developing and marketing products based on their ideas. That's something the Japanese patented years ago.

By Michele Galen in New York, with John Carey in Washington, Stephanie Anderson Forest in Dallas, Joan O'C. Hamilton in San Francisco, and bureau reports

ROB DOYLE/BW

Sometimes what's behind your truck is more important than what's in it.

Anyone who's ever tried to make a living in the trucking business knows that not all trucks are created equal. The major difference lies with the truck manufacturer—the people behind the badge.

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UNIONS

RIDING THE PICKET LINE: CATERPILLAR SAYS IT CAN'T AFFORD DEERE'S UAW DEAL

CAT MAY BE TRYING TO BULLDOZE THE IMMOVABLE

A long, bitter contract fight with the UAW looks unavoidable

Caterpillar Inc. has long been in the forefront of efforts to create flexible factories that can respond to shifts in demand or technology. The Peoria-based company launched a $2.1 billion modernization plan in 1987 designed to save $420 million by 1993. Then last year, new CEO Donald V. Fites decided that Cat needed to be faster on its feet. So he decentralized the construction-equipment maker into 17 profit centers.

Now, Fites wants to squeeze flexibility out of his 17,000 unionized workers. In a bruising clash with the United Auto Workers, Cat is trying to eliminate companywide contract provisions covering everything from job classifications to work rules. Instead, Fites wants each profit center to use whatever work arrangement best fits its needs.

BAD QUARTER. The goal, a spokesman says, is to keep pace with archrival Komatsu Ltd. and other foreign producers. (Senior Caterpillar executives wouldn't comment for this story.) Last year, a record $6 billion of Cat's $11.4 billion in sales was outside the U.S. And $3.4 billion of that involved products built in the U.S. Industry analysts say that U.S. labor rates could hurt sales if the dollar rises and wipes out the edge provided by its current weakness. The company also says that it can't afford the package the UAW just won at Deere & Co.

In the UAW, Fites may have met an even tougher opponent than the Japanese. The UAW won't easily part with its tradition of a "pattern" agreement for the industry. It put 2,400 members on strike in early November in hopes of pressuring Cat without idling all UAW members there. Cat retaliated by locking out 6,000 more workers. On Nov. 20, it laid off 500. A long conflict seems likely. Declares UAW Secretary-Treasurer Bill Casstevens: "We're light years apart."

STICKING POINTS IN THE CAT STRIKE

FLEXIBILITY The company wants more issues resolved at the local level

WAGES Management is offering no wage increases beyond inflation in years two and three of the contract. It also wants a lower pay scale for some new employees

FRINGES Caterpillar wants workers to pay part of their medical bills

DATA: BW

The dispute is mauling Cat's bottom line. On Nov. 14, the company conceded that it will lose more than $86 million in the fourth quarter and twice that for 1991. David G. Sutliff, an analyst at S. G. Warburg & Co., figures that the strike accounts for more than half of the yearend collapse. "I don't know what [Caterpillar] will get out of this conflict that's worth this price," says Sutliff.

Fites seems to believe that suffering now will pay off later. In addition to cost-of-living adjustments (COLA), Deere's new three-year agreement provides for a 3% wage hike, two lump-sum payments equal to 3% each, plus improved health insurance and pension. Cat's latest proposal would grant COLA and a wage increase of about 3% in the first year, but 3,700 lower-skilled workers wouldn't get the pay hikes. And it would provide only cost-of-living adjustments thereafter. Cat also wants employees to pay more for health coverage.

Cat would get an even bigger payoff from fitting labor terms to each profit center. Take its parts-distribution business, whose four facilities employ 3,000 workers. The company wants to cut wages for unskilled new hires to half the current $15 an hour. But union officials are dead set against two-tier wage structures, which "don't exist anywhere else in the UAW," says Casstevens.

'DIVIDE AND CONQUER.' The UAW has dug in its heels on Fites' decentralization plan because it fears that concessions at one Cat plant might lead to demands for greater concessions at others. Union officials also worry that their locals would be played off against each other. "They would divide and conquer us," says UAW Local 751 President Larry Soloman.

Casstevens argues that Cat should follow Deere and look less to wage savings and more toward voluntary productivity gains. Since 1979, he says, the UAW has helped to cut Cat's unit labor costs by more than 15%. For instance, J. P. Yarbrough, the president of UAW Local 145, says that Cat's Aurora (Ill.) plant has saved some $10 million since 1986, mostly from changes suggested by workers on quality teams.

Right now, neither side seems inclined to bend. Analysts say Caterpillar has stockpiled enough inventory to withstand a strike of up to three months more. The UAW has a $820 million strike fund and won't budge as long as Cat tries to buck UAW tradition. For both sides, competing in a global arena is proving a costly proposition.

By Kevin Kelly in Chicago, with Aaron Bernstein in Detroit

AT SATURN, WHAT WORKERS WANT IS...FEWER DEFECTS

After a new labor pact, plant output takes a backseat to quality

When General Motors Corp. Chairman Robert C. Stempel paid a visit to Saturn Corp.'s actory in Spring Hill, Tenn., on Oct. 4, e walked smack into a demonstration y the United Auto Workers. With negoations under way for a new labor conact, plant workers had donned blackd-orange armbands and launched a ork slowdown.

Another demand for higher pay? Not xactly. Saturn workers were complaing because management was trying to crease output of the popular compact the expense of quality. Done right, igh quality and high productivity hould go hand in hand. But a year after he first car rolled out of the plant, Satrn is still rooting out manufacturing ugs, and working too fast can spoil uality. The workers knew that their obs, in the long run, depended on makg a top-notch product. Management eemed temporarily to have forgotten. We were not going to sacrifice quality to get productivity," says Michael Bennett, president of UAW Local 1853.

The issue was settled on Nov. 13, when Saturn's 4,500 unionized workers approved their first labor pact since GM started the company in 1983. The union won a central demand: It delayed Saturn's plan to start tying 20% of workers' pay to aggressive quality and productivity goals. Management, in essence, conceded that Saturn's slow start, primarily its own fault, would have led to an immediate 20% pay cut. Saturn also eased off its production goal of 900 cars a day; it now produces 700. While these moves weren't good news for Saturn, they at least affirmed the revolutionary labor and management bond that has made the two sides working partners there. "In some cases, [the union] was absolutely right," concedes Saturn's president, Richard G. (Skip) LeFauve, who adds that the protests "refocused everyone to the sense of urgency to get the quality problems fixed."

SATURN'S ROCKY START

OCTOBER, 1990 Saturns go on sale

JANUARY, 1991 Production lags seriously at just 4,245 cars. Saturn delays opening 30 dealerships; pays 58 existing dealers an average $100,000 each to compensate for lack of cars

FEBRUARY Recalls 1,210 cars to repair faulty seat backs that could tip back without warning

MAY Recalls and replaces 1,836 cars filled with bad engine coolant

SEPTEMBER October *Consumer Reports* advises readers to steer clear of Saturn because of unproven reliability

OCTOBER GM Chairman Robert Stempel visits Spring Hill (Tenn.) plant and finds that production workers are protesting a decline in quality

NOVEMBER UAW Local 1853 ratifies Saturn's new labor agreement, which delays plan to tie 20% of pay to the plant's quality and productivity

DATA: BW

The quality dispute comes at a critical time for Saturn. Former GM Chairman Roger B. Smith launched the company in an effort to do what no U. S. auto maker has accomplished in two decades: profitably build high-quality small cars that compete with Japanese models. But Saturn has been blocked by a series of setbacks since production began (table). Early on, it was unable to turn out enough sedans and coupes to meet demand. In the 1991 model year, Saturn built just 50,000 cars—one-third the original projection and well below capacity of 240,000.

WORD OF MOUTH. The problem with this is that Saturn buyers love their cars. A survey by California market researcher J. D. Power & Associates Inc. ranks Saturn sixth in customer satisfaction—just below cars such as Lincoln and Mercedes-Benz, which cost three times Saturn's average $11,000 sticker price. Power also says Saturn owners recommend their cars to more people than the owners of any other brand, even luxury lines. And nearly 95% of Saturn buyers have paid full retail. That's almost unheard-of in a market where rebates average $1,600 a car. "In our first four months, we probably could have sold another 500 cars," says James W. Lupient, president of Lupient Automotive Group, which runs a dozen Minneapolis dealerships.

Anxious Saturn managers hoped to capitalize on this ground swell in September, when they boosted production goals by 13%, to 900 cars a day. But as soon as they did, the plant's defect rate spiked up. For instance, Spring Hill's just-in-time inventory system, which delivers components to the assembly line just as they're needed, leaves little room for error. If a problem interrupts production in the building that casts, machines, and assembles Saturn's four-cylinder aluminum engines, the final assembly line next door grinds to a halt just six minutes later.

As a result, even minor snafus can shut down the whole line. And there have been a raft of such glitches. For instance, Saturn sprays body panels with a new, water-based paint to avoid the environmental drawbacks of solvent-based paints. But it's hard to keep the coating's viscosity constant, so the paint line sometimes slows to a crawl while workers ensure even coverage. In addi-

DATA: DRI

tion, the molds for Saturn's plastic fenders produce an unsightly seam along one edge. So the company ships fenders 15 miles to a small independent shop in Columbia, Tenn., for hand sanding, then back to Spring Hill for painting. And computerized spot-welding machines in Saturn's framing department conk out regularly, sometimes requiring a software fix. Indeed, these and other problems were reasons the union wanted production slowed.

HIGH-FLOWN IDEAS. Saturn's cooperative approach to labor relations—which includes involving workers in decision-making from the plant floor to the board room—has caused other problems for management, too. The idea is to treat workers as co-owners who have as big a stake in the success of the company as executives or shareholders. This requires employees to work closely in production-line teams. But not everyone likes the practical application of such high-flown ideas. In a survey of union members last summer, about 6% said they were unhappy at Spring Hill and wanted out. The reasons varied. Some hadn't adjusted to teamwork. Others had personal problems, such as split families or unsold houses, that were caused when they transferred from other GM plants.

Although the proportion of workers who are disgruntled is small, GM went to extreme lengths in the new labor agreement not to let any dissatisfied employees poison the atmosphere. The contract offers severance pay for those who wish to leave, ranging from $15,000 to $50,000 depending on length of service at GM. Saturn officials figure that 25 to 100 of the plant's workers will opt to go. Such buyouts are expensive and usually are done only by companies trying to cut their work force. But Saturn decided that harmony was worth the price. "They don't want to be here, and they aren't very productive," says Thomas G. Manoff, Saturn's vice-president for finance, who doesn't plan to hire replacement workers.

Although Saturn managers are treading carefully in dealing with the company's startup woes, the pressure to move faster is growing. With GM's car sales mired in a yearlong slump, the company is careening toward a 1991 loss of $2.6 billion. And some $500 million of that is because of Saturn, analysts say. "We're all under the gun to help the mother ship," says Manoff. Union and management officials are confident that they can work out all of Saturn's kinks. If they do, it could be just in time to meet rising demand, assuming that Detroit's sales perk up next spring. Until then, GM's Stempel has little choice but to grit his teeth and bear the losses.

By David Woodruff in Spring Hill, Tenn.

CONRAD BLACK LIKES A GOOD FIGHT—AND HE'S GETTING ONE

The prickly media baron is slugging it out in Australia

In a characteristic display of his tip-top connections, Canadian newspaper mogul Conrad M. Black recently hosted a glittering dinner party at London's Spencer House, the spectacular ancestral home of Princess Diana. The guest list of several dozen luminaries included Sir James Goldsmith, former NATO Secretary-General Lord Carrington, and former Federal Reserve Board Chairman Paul A. Volcker. After dinner, the speaker was former British Prime Minister Margaret Thatcher.

But on the very night that Black was being toasted in London, he was being skewered in Australia. On Oct. 16, nearly 500 striking journalists in Sydney were busy handing out thousands of inflammatory handbills titled "A Black Day for Australia." The reason for their ire: Black's bid for John Fairfax Group Ltd., owner of Australia's three most influential newspapers—*The Sydney Morning Herald*, *The Age*, and *The Australian Financial Review*.

The protesting employees fear massive layoffs and a rightward shift in the papers' editorial direction. They're also fretting about the media clout of Black's partner in the bid, magazine and broadcasting giant Kerry F. Packer. Dozens of politicians have joined the fight, including former Prime Minister Malcolm Fraser, who contends that Black "is not a proper person to own media in Australia." Black accuses his critics of spreading "terrible disinformation."

This is not the first time Black, 47, has stirred up violently contrasting opinions. But even his staunchest critics concede that he has an impressive eye for opportunity. Since 1985, he has bought and rejuvenated *The Daily Telegraph*, Britain's largest upmarket or "quality" paper; beaten out Robert Maxwell for control of *The Jerusalem Post*; and built American Publishing Co. into what analyst John Morton calls "the fastest-growing newspaper chain in the U. S."

PLENTY OF CASH. Black's main company, Hollinger Inc., now publishes 91 daily newspapers, mostly in the U. S. and Canada, with a combined circulation of some 2 million (table). Even archrival Kenneth R. Thomson, the billionaire chairman of Toronto-based Thomson Corp., says Black has done a "remarkable" job.

Black revels in the newspaper business for several reasons. A voracious reader, he boasts a library of 16,000 books. He's also extremely interested in public policy, and newspapers give him a perfect vehicle to express his conservative views. Finally, newspapers have made him piles of money. His controlling stake in Hollinger is worth around $250 million, about three times its value in 1985.

To keep expanding, Black aims to tap Hollinger's rich cash flow, which reached $110 million last year. "Unlike some other media companies, we don't want to overstretch ourselves," Black says. Then he had better be careful. While revenues have tripled since 1986, to $703 million, the savage media recession is taking its toll. In the first six months of the year

HOLLINGER'S MEDIA EMPIRE

THE DAILY TELEGRAPH A leading quality newspaper in Britain, with circulation of 1.1 million

AMERICAN PUBLISHING Fast-growing U.S. newspaper chain with 77 dailies and 54 weeklies. Total paid daily circulation of 477,000

UNIMEDIA Three daily French-language newspapers in Quebec, plus more than a dozen weekly papers in Canada

STERLING NEWSPAPERS Publishes daily and weekly papers in British Columbia and Prince Edward Island

THE JERUSALEM POST English-language daily in Israel with circulation of 22,000; international weekly circulation of 55,000

OTHER HOLDINGS Britain's *The Spectator* and Canada's *Saturday Night* magazines; 15% of Canada's *The Financial Post*; 9% of United Newspapers, publisher of Britain's *Daily Express*

DATA BW

PEOPLE

ollinger's operating earnings were wn 30%. With debt, including convert- e debentures, of $615 million, Black's bt-to-capital ratio is already near 60%. ill, he is confident he can conquer Aus- alia, as his stake in Fairfax would re- ire borrowing only about $50 million. Black arranged a formidable consor- m to bid for Fairfax, which was aced in receivership last December af- an LBO collapsed under $980 million debt. If the bid succeeds, *The Daily legraph* will pay $71 million in cash r a 20% stake. Packer, Australia's ealthiest man, would have %, and public shareholdd- s 65%. But Black's group, bbed Tourang, faces stri- nt opposition from the In- pendent Newspapers PLC nsortium, led by H. J. einz CEO Anthony J. F. Reilly, and Australian In- pendent Newspapers, a oup of businessmen and stitutional investors.

The secret bids all are ought to be around $1 bil- n, but Black's group may ve a financial edge. Some % of Fairfax' junk-bond lders—including Crédit onnais and Prudential In- rance Co.—have agreed swap their bonds for de- ntures in Tourang if ack prevails.

GHT TURN. But the Black- cker bid is most contro- rsial politically. Critics ntend that Packer should t be allowed to increase s media role further. And ack has been vilified as a reign interloper. "If you e strong-minded, inter- ntionist proprietors with atcherite views, he's ur man," says O'Reilly. ack's enemies cite the arp rightward shift taken *The Jerusalem Post*, Is- el's major English-lan- age daily, after Hol- ger's takeover. More than 20 senior affers resigned in protest.

But Black, who relaxes by reading litary history, is waging a vigorous unterassault. Following the handbill cident in Sydney, he sued four journal- s for defamation. He has Henry Kis- nger, a member of Hollinger's interna- nal advisory board, putting in a good rd for him with Australian Prime inister Robert J. Hawke. And Black is tacking the "outrageous myth" that dictates editorial policy.

It's not hard to imagine being intimi- ted by Black. Heavyset and stern, he esn't suffer fools at all. He can be contemptuous of journalists. Asked by BUSINESS WEEK if he would pose for a picture in his library, the media baron snapped: "I won't have the press in my home!" He is famously quick to sue for libel. Black has a suit against the publishers of *God's Dominion*, a 1990 book on religion in Canada that mentions him only briefly. "The passage states that I have contributed to the sum total of human misery," he complains, calling it "monstrous defamation."

Black has had a maverick streak since he was a boy. The son of a brewing executive, he was expelled from Toronto's elite Upper Canada College after he and two other students stole copies of upcoming final exams and sold them to other students. "It was an oppressive school—they didn't spare the rod—and I rebelled against it," says Black. "It doesn't embarrass me."

It certainly didn't slow his meteoric rise. After earning degrees from Carleton, McGill, and Laval Universities, Black began readying himself to wrest control of Argus Corp., then Canada's premier holding company. Black and his brother Montegu had inherited a 22% stake in Ravelston Corp., which controlled Argus, from their father. When Argus Chairman J. A. McDougald died in 1978, Black used this stake to mount a successful bid for control.

Black restructured and sold off virtually all of Argus' assets, including tractor giant Massey-Ferguson and Dominion Stores. When he withdrew some $55 million in surplus funds from Dominion's pension fund in 1986, he was renounced by the unions, though other companies had done the same. Bob Rae, now Ontario's Premier, blasted Black as a "representative of bloated capitalism at its worst"—a charge he called ludicrous. Argus' stock soared, boosting the value of Black's stake from $1.5 million in 1978 to $80 million by 1985.

BLACK IS SUING FOUR SYDNEY JOURNALISTS FOR DEFAMATION

SHREWD DEAL. Black turned his attention to newspapers in 1969, when he bought a small paper in Quebec. His biggest challenge came 17 years later, when he gained control of the London-based *Daily Telegraph*. It had lost 300,000 readers in the previous five years, to 1.1 million, and was hemorrhaging up to $3.5 million a month. The debt-to-equity ratio was a horrific 4 to 1.

Drastic changes followed. "Every aspect of the business, from A to Z, was changed," says Deputy Chairman Sir Frank Rogers. The staff was cleaved from 4,000 to 1,500, much of the long-separate daily and Sunday staffs were combined, and the paper was redesigned for younger readers. It was a stunning success: Operating losses of $17.5 million in 1986 became last year's $78 million profit. Considering Hollinger paid a mere $53 million for control of a paper Rupert Murdoch recently said was worth $1.5 billion, it appears that Black pulled off one of the shrewdest media deals in years.

Now, he's waiting to see if his Australian bid will succeed. Even if he loses, he'll surely buy papers elsewhere. He desperately wants a more visible U. S. property. He would like more papers in Britain, and he's eyeing Latin America and South Africa. When asked why he keeps buying papers, Black quotes press baron Roy Thomson: "To make money." And why does he want more money? "To buy more newspapers."

By William C. Symonds in Toronto, with Richard A. Melcher in London, Stephen Hutcheon in Sydney, and bureau reports

EDWARD GAJDE.

ADVERTISING

CHIAT/DAY IS WINNING, AFTER LOSING, AFTER WINNING...

The up-and-down shop's billings will rise 18%, to $1.2 billion, in '91

Jay Chiat spent his honeymoon last July on the Riviera. Too bad his bride stayed home in New York. Five hours after marrying photographer Donatella Brun, the 60-year-old advertising executive hopped a plane to rendezvous with top executives of American Express Co. As Brun waited, Chiat successfully sold the executives on his new ad campaign to revive the lagging Green Card. "The meeting was planned," Chiat laughs. "The wedding wasn't."

Such fanatical devotion has helped Jay Chiat build his 23-year-old agency from a quirky, creative California shop into a major contender. On Nov. 7, Chiat/Day/Mojo Inc. beat out incumbent Ogilvy & Mather Worldwide Inc. to win the $60 million charge-card account. AmEx joins other accounts such as Reebok International Ltd. and Shearson Lehman Brothers Inc., all of which add up to $150 million in new billings for the New York office in 1991. Throw in new business in London, Toronto, and Venice, Calif., and Chiat says worldwide billings will rise 18%, to $1.2 billion.

But manic dedication hasn't guaranteed stability: Indeed, the American Express victory offsets a devastating string of account losses. "We've had a few comebacks in our history," says agency president Lee Clow. "I think it's part of our culture."

ALARMING EXODUS. That's an understatement. Chiat/Day bounces up and down as wildly as the bungee jumper it once filmed in a controversial—and quickly yanked—ad for Reebok athletic shoes. Among the high-profile accounts the closely held agency has won and lost in its 23 years: Honda, Nike, Apple Computer, and Royal Caribbean Cruise Line. With Reebok, Chiat/Day won, then lost, then won the account again.

The exodus of clients grew so alarming last year that many wondered whether Chiat's high-style approach was badly out of step with the hard-sell marketing methods of the 1990s. What's more, while Chiat spent 25% of his time in Europe mapping out foreign expansion, several top agency executives were exiting at home.

Chiat says the agency's instability is the price of having risk-takers as clients. "We've made our mark by working with rather flamboyant entrepreneurs," he says. After being hired by Apple founder Steven P. Jobs, for example, Chiat was fired by Jobs's successor as CEO, John Sculley.

The rescue mission started when Chiat resumed his job as creative director, a title he had relinquished years ago. Chiat even knocked out some headlines for clients such as Reebok and Shearso and his prodigious energy helped r charge the agency. "Jay has sort of a iron-man complex," says Steve Hayde a former Chiat executive who now ru BBDO's Los Angeles office. "You'd b working with him at 2:30 a.m. and he call a meeting for 7 a.m."

Despite the account wins, Chiat won be able to start sleeping late. For o thing, he has taken on some of the i dustry's thorniest marketing problem Reebok, for example, is still fighting regain its lead against Nike Inc. Mo important, American Express must de with the erosion of its franchise in a era when its gilt-edged image seems ou moded. Industry newsletter publishe Spencer Nilson figures AmEx's share the U. S. credit- and charge-card mark dropped 1.62 percentage points, to 21.1% in the first half of 1991.

Chiat's approach is to treat th AmEx card as being in a class b itself and its name as an icon—lik Coca-Cola. The slogan: "The Car The American Express Card," a companies ads playing up the card strengths. In one spot, a busines dinner unexpectedly grows from to 12 people. The host is unruffle though, since his card has no prese spending limit. Chiat/Day's ads ar also hipper and more offbeat tha Ogilvy's more traditional work. I the ads, the card doubles as the ta of a supersonic jet or as a foo bridge to a putting green.

MEASURING SUCCESS. Kenneth Chenault, president of AmEx's U. S charge-card division, says he chos Chiat/Day because the ads wer "captivating" as well as practica But some wonder whether Chiat devotion to creativity in advertisin might yet rub such s ber clients as Amer can Express th wrong way. Chiat i sists he measures su cess not by billings o the longevity of cl ents but by the qual ty of "the work"— term he and his staf ers repeat like a mar tra. "Chiat is obsesse with the work," say Hayden, "so some times the relationshi with the client suffers."

With AmEx's unusual new campaig Chiat is putting his belief in "the work to the test for a mainstream client. If h can pull it off, his shop's latest ho streak may actually burn a while.

By Mark Landler in New Yor

JAY CHIAT: "AN IRON-MAN COMPLEX"

IT'S CHIAT'S DAY

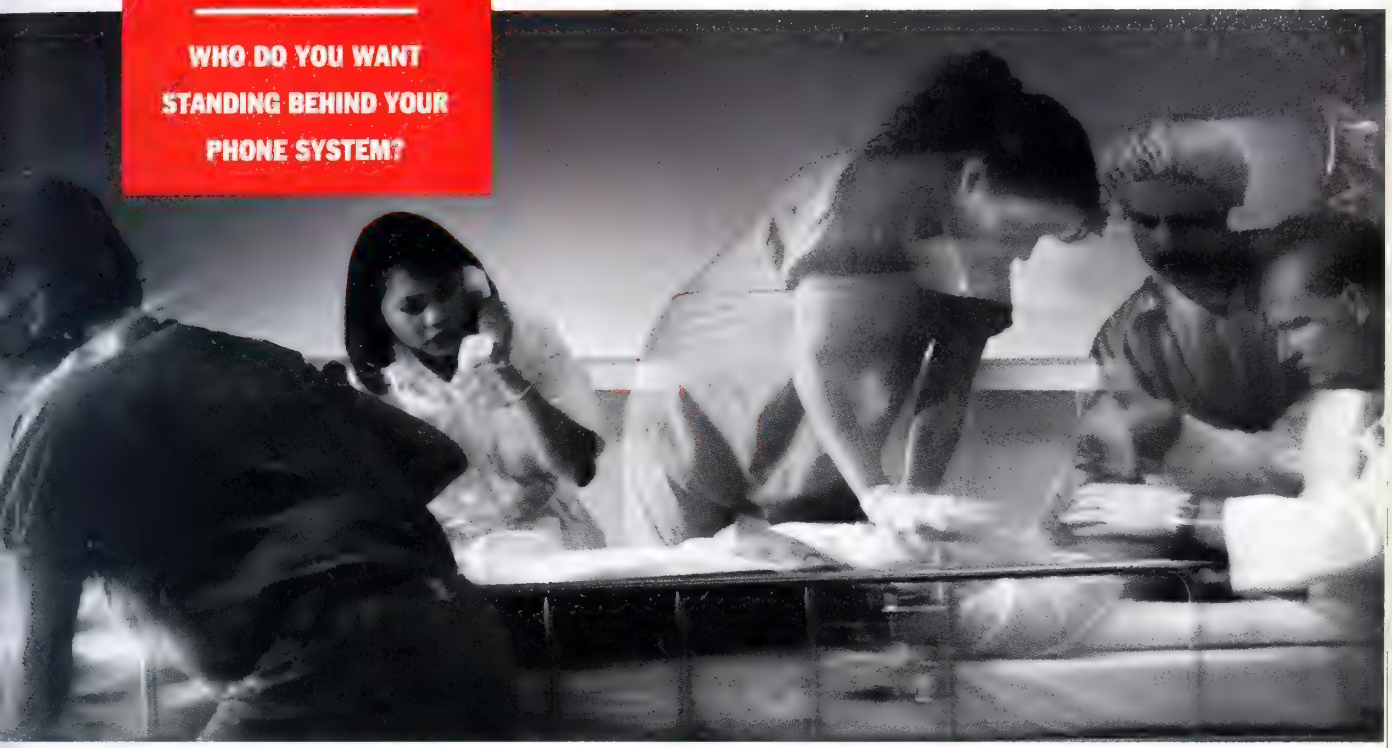
New accounts won in fiscal 1991 by Chiat/Day/Mojo New York

Account	Billings Millions
CHEMICAL MANUFACTURERS ASSN.	$10
SHEARSON LEHMAN BROTHERS	20
REEBOK INTERNATIONAL	60
AMERICAN EXPRESS (GREEN CARD)	60

DATA: COMPANY REPORTS, CHIAT/DAY/MOJO INC.

WHEN OVER 75,000 LIVES ARE ON THE LINE

WHO DO YOU WANT STANDING BEHIND YOUR PHONE SYSTEM?



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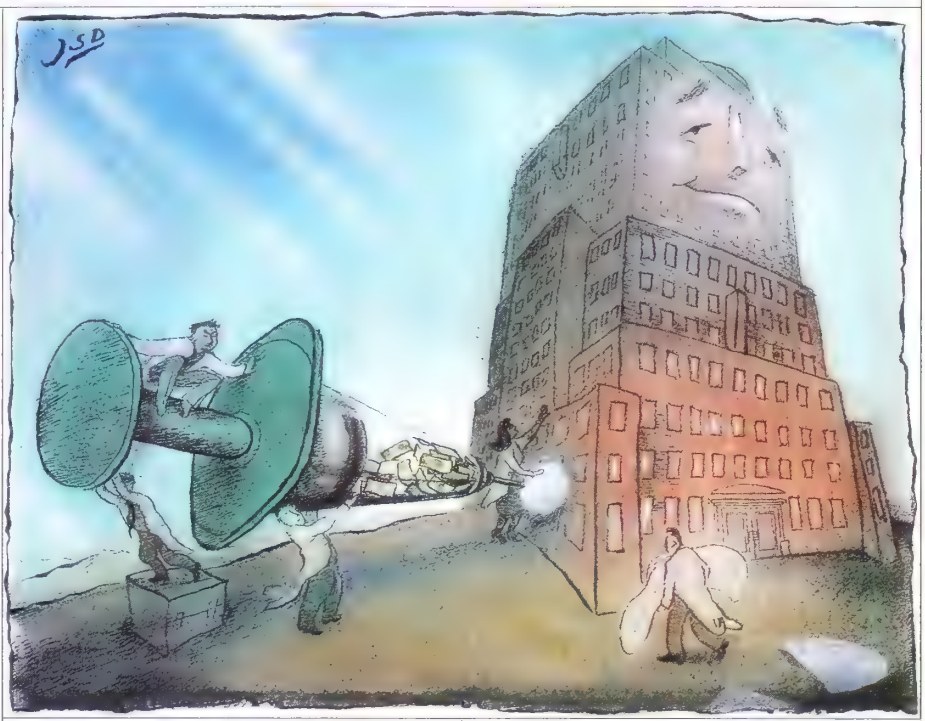
NOW THAT WASN'T SO BAD, WAS IT?

or most companies, writing off retiree health benefits will mean only a onetime ouch



or a time, it seemed as big a threat to Corporate America as foreign competition or a deep recession: a ange in accounting rules that could ell deplete the net worth of many of e nation's largest companies. For ars, employers habitually took care of eir medical bills on a pay-as-you-go ba-s, with no regard for the future. But nder a new accounting rule adopted st year, big companies are required, no ter than 1993, to set aside large sums r a decade or two's worth of retiree alth benefits (table). Companies with wer than 500 workers get until 1995. mployers can either amortize the cost er 20 years or zap earnings in the first ar. The total hit: up to $1 trillion.

That number, while awesome, now ems much less scary than anticipated. ost companies, after crunching the mbers, are finding the new rule to be onetime problem easily shrugged off. nd the markets are agreeing by not nalizing their stock prices.

O WHAT? Despite initial complaints, ost companies have come to accept the tionale for the new rule. To the Finan-al Accounting Standards Board, which ersees U. S. accounting standards and omulgated the so-called 106 rule, the y-as-you-go approach is irresponsible. ignificant promises have been made to mployees," says FASB research director mothy S. Lucas. "You shouldn't report income the money at is meant for their alth care." FASB is wor-ed that corporate alth care costs will ntinue to burgeon—ey were up 14% in 90, and a double-digit crease is expected this ar. A survey by con-lting firm William M. ercer Inc. found that % of companies with ore than 5,000 workers ffer retiree medical nefits.

General Electric Co. is mong the many companies that are easily handling billion-dollar hits. On Sept. 16, it announced an aftertax charge to earnings of $1.8 billion, or $2.07 per share. That was applied to the first-quarter financial report, resulting in a loss of $800 million. Although the charge will depress earnings for the entire year, GE stands poised for a rebound in 1992. After the announcement about the charge, GE's $70-per-share stock actually edged up by $2.

The reason for the market's so-what reaction is that the $1.8 billion is a noncash item. It reduces GE's net worth but doesn't affect the business' cash flow. No funds are diverted from operations, capital expenditures, or research and development. "Capital markets see through accounting contrivances," says Daniel J. Donoghue, group vice-president at ratings agency Duff & Phelps/MCM Investment Research Co. And the same seems to go for the raters. In the wake of the charge, GE has had no trouble keeping its AAA rating.

This isn't to say that everyone will be able to escape the FASB rule unscathed. There's a separate ring of hell for a small number of large, heavily unionized companies with charges so high that they endanger credit ratings. Thus far, General Motors Corp. is the only one in residence. On Nov. 8, GM, with 350,000 retirees, announced that its hit would range from $16 billion to $24 billion.

CREDIT WATCH. The nation's No. 1 auto maker hasn't indicated how it will deal with this tremendous charge, which will be from 57% to 86% of GM's net worth. The charge was one reason—sputtering auto sales was the other—that Standard & Poor's Corp. placed GM on its credit-watch list for a possible debt downgrade. "A charge that size has to put them at a competitive disadvantage,"

SOME BIG HEALTH COST HITS

	Potential charge to earnings	Net worth*
	Billions of dollars	
CHRYSLER	$6.0	$6.0
FORD	9.0	20.4
GE	2.3	20.9
GM	24.0	28.0
GOODYEAR	1.8	2.0
IBM	1.8	43.0
USX	3.0	5.3

*As of Sept. 30, 1991
DATA: COMPANY REPORTS

JOHN S. DYKES

says Solomon Samson, S&P's managing director for corporate finance. In the week following the charge news, GM stock dropped 4.2%.

The No. 3 auto maker also is suffering. Chrysler Corp.'s many merger talks with potential buyers keep falling through, and Samson blames Chrysler's $6 billion charge, coupled with its $3.5 billion in unfunded pension liabilities, for scaring away purchasers.

American Telephone & Telegraph Co., with 123,000 retirees, has been rumored to be almost as badly off as GM. AT&T executives tried to reassure analysts on Nov. 19 that the charge won't be even close to GM's low-end $16 billion estimate, although the phone company isn't ready yet to release its figure.

The preferred way of taking the charge is all at once, so a company can leave it behind, like a bad dream, and not have earnings gouged for 20 years. "If a company's balance sheet is strong enough, it makes sense to take the hit at one time," says George B. Wagoner, a principal at Mercer, which estimates that only half of U. S. corporations will be able to do that. GM, most experts agree, can't possibly take the onetime solution.

CUTBACK PITFALL. One side effect of the accounting rule is that companies are cutting back or scrapping retiree health benefits. This is particularly true for medium-size, nonunion employers. Capital Holding Corp., a Louisville insurance and financial-services outfit, took its relatively small charge of $80 million early, in 1989. It kept the health program going for retirees and left current workers over 55 years of age eligible but deep-sixed the plan for everyone else.

The cutback strategy has a pitfall, however: a court challenge. That's what GM got when it started charging its 84,000 white-collar retirees yearly deductibles of $300 and limiting reimbursements to 80% of the bill. Since this plan was not part of a union contract—the United Auto Workers pact forbids such cost-saving steps for blue-collar retirees—GM felt it was within its rights. "That's not fair, doing this after we retired," argues Leonard P. Moeller, an accountant who retired in 1982.

Still, for the small number of companies hammered by the FASB rule, there's hope that the predicament may not turn out to be as bad as it looks. National health coverage, now popular in Washington, may eliminate altogether the need for corporate retiree health schemes. Then—hallelujah—companies might be able to add back some of the charges they're taking now.

By Larry Light in New York, with James B. Treece in Detroit, Lisa Driscoll in New Haven, and bureau reports

INSURANCE

SLEEK APPOINTMENTS: DAI ICHI KYOTO IS LOCATED IN THIS BRUSSELS TOWER

WHEN AN INSURER MAY NOT BE QUITE AS GRAND AS ITS NAME

Dai Ichi Kyoto sounds like a top Japanese company. It's not

Mention the words "Dai Ichi" and finance types immediately think of Dai-Ichi Kangyo Bank Ltd., the world's largest bank, or perhaps giant Dai-Ichi Mutual Life Insurance, Japan's venerable insurer. But these days, especially among insurance regulators, there's talk of a third Dai Ichi, something called Dai Ichi Kyoto Reinsurance Co. And much of the talk isn't good.

The company has become an intriguing mystery to regulators on three continents, who are concerned about insurer solvency. While there's no hard evidence that Dai Ichi Kyoto has done anything wrong, regulators have become increasingly concerned about a rash of shaky foreign reinsurers dealing with U. S. companies. Some take on risks and then walk away when they're called upon to pay claims that cover losses.

Dai Ichi Kyoto, which is incorporated in Belgium, says it is financed by 6 Japanese pension funds. But state insurance regulators throughout the U. S. have been unable to determine the company's owners, and government officials in Tokyo say the pension funds don't exist. Dai Ichi Kyoto, according to Dai Ichi Mutual, has misrepresented itself as affiliated with the insurer. Says one U. S. regulator: "Nobody knows who the hell these guys are." Adds David E. Simmons, general counsel for the National Association of Insurance Commissioners: "There have been questions raised as to how substantial [Dai Ichi Kyoto] is."

> Regulators on three continents want to see if the company is as solid as it says it is

MURKY ROOTS. The company insists that it is solid. John E. Mitchell, Dai Ichi Kyoto's London-based head underwriter says it is a legitimate reinsurer with $5 million in capital. He says the company writes a limited volume of U. S. business that it views "closely and with caution."

Determining Dai Ichi Kyoto's ownership and wherewithal is important: Reinsurance, by which insurers share risks, is a vital financial backstop. But a third of the $60 billion-plus that U. S. insurers now reinsure goes to offshore companies whose finances often are shielded from official U. S. scrutiny.

U. S. officials first heard of Dai Ichi

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Kyoto in 1990, in connection with the now insolvent World Life & Health Insurance Co. of Pennsylvania. Dai Ichi was listed in World Life documents as one of several reinsurers of health coverage sold by the company. World Life had bought reinsurance from thinly capitalized groups represented by Atlanta-based insurance broker Alan Teale. Teale's business dealings have been probed by the Senate permanent subcommittee on investigations and also are the subject of a federal grand jury inquiry in Georgia (BW—July 29). Dai Ichi Kyoto has denied it ever had reinsurance deals with World Life or Teale, who won't comment.

MASQUERADER. Regulators in several states now believe Dai Ichi Kyoto may be trying to masquerade as an affiliate of more established companies. An official of Dai-Ichi Mutual Life told a Delaware regulator that Dai Ichi Kyoto had unsuccessfully tried to borrow money from a Belgian branch of Britain's Barclays Bank PLC by misrepresenting itself as a subsidiary of Dai-Ichi Mutual. The reinsurer's Mitchell could not be reached on this point.

Although the nature and volume of Dai Ichi Kyoto's U.S. operations are murky, the company seems to be focusing on reinsuring financial-guarantee bonds. Lenders buy such bonds from insurers to guarantee repayment by less-than-creditworthy borrowers. Bonds also are bought by borrowers who otherwise would have been unable to get credit.

One of Dai Ichi Kyoto's recent deals involves Grassy Hills Country Club of Orange, Conn., which is in Chapter 11. To get out of bankruptcy court, its owner, Fairway Land Acquisition Co., is borrowing $2 million to repay a mortgage on the club. To get the loan approved, the owner plans to pay $253,000 in fees for a $2 million bond, issued by United Financial Operations of Englewood, Colo., and reinsured by Dai Ichi Kyoto. Neither United nor the reinsurer could be reached for comment on this issue.

Grassy Hills' accountant, Michael J. Knight, says the club's owners still are checking out the Dai Ichi deal. "We got it through a lot of different contacts," says Knight. "I chased the chain all the way around the world myself." He says he has seen financial information on Dai Ichi Kyoto but adds: "I'm not sure it's satisfactory yet." The club's creditors also are skeptical. Says Frances Pennarola, the lawyer for one debt holder: "I don't think a reasonably prudent lender would make a loan on the basis of this." The bankruptcy court is scheduled to consider the proposed reorganization on Nov. 25.

Regulators are busily probing Dai Ichi Kyoto's background, especially its claim that it was organized in 1989 with money from 64 Japanese pension funds. A recent letter from the Japanese Finance Ministry to the National Association of Insurance Commissioners says Tokyo authorities "have not found any information on their existence in Japan." Dai Ichi Kyoto apparently wa bought last year by a Londo outfit named Dai Ichi Holding PLC, whose stockholders ar three Delaware corporations tha share a single agent, a Wilming ton woman who will not ident fy just who is behind th threesome.

NO AUDIT. Uncertainty even su rounds Dai Ichi Kyoto's accoun tants. At the time of its found ing, Dai Ichi Kyoto issue promotional materials listing th Brussels office of Ernst Young as its auditor. While th firm had advised Dai Ichi Kyot on incorporation, it says it did not unde take any audit work. Coopers & Lybran did audit Dai Ichi, but the firm recentl reported to Delaware authorities that had withdrawn because "the compan failed to provide us with any informatio over a period of months."

Not surprisingly, such reticenc doesn't sit well with state regulators Dai Ichi Kyoto is unlikely to enjoy muc more time in the shadows.

By Tim Smart in Washingto

WHAT IS DAI ICHI KYOTO REINSURANCE?

IT IS AFFILIATED WITH:

- ☐ **A.** Dai-Ichi Kangyo, the world's largest bank
- ☐ **B.** Dai-Ichi Mutual Life Insurance, Japan's oldest life insurer
- ☐ **C.** A group of 64 Japanese pension funds
- ☐ **D.** None of the above

The answer is D. The bank and the insurer disavow links to Dai Ichi Kyoto. Japanese officials say the pension funds don't exist DATA: BW

MARKETS

POST-SALOMON REFORM? DON'T HOLD YOUR BREATH

Neither Congress nor technology will change Treasury auctions

The close-knit group of 39 primary dealers in Treasury securities was shaken to the core not too long ago by revelations that Salomon Brothers Inc., the club's most influential member, had fabricated bids at several Treasury auctions. The disclosure set off a barrage of efforts to reform the largely unregulated $2.1 trillion market in Treasury securities. Legislation was expected to sail through Congress and undermine the primary dealers' powerful grip on the Treasury market.

Three months later, it isn't working out that way. The regulatory juggernaut has been stalled—in all likelihood, for good. True, the Salomon scandal has ac celerated efforts to improve informatio disclosure in the Treasury market and t automate antiquated auction procedures But such moves, which began before th Salomon affair, are unlikely to hav much effect on the primary dealers o investors. Squabbling among the Trea sury Dept., the Federal Reserve, and th Securities & Exchange Commission meanwhile, has kept regulators fron forging a united front. And moves fo change on Capitol Hill have been de railed by internecine quarrels.

> One big brake on reform: Fears that fiddling with the status quo could add billions to the budget deficit

'TREMENDOUS' EXPENSE. Also acting as brake on reform are fears that fiddlin with the system could add billions to th budget deficit. If new rules raise th cost to bidders by, say, a tenth of point, and they pass that on to the gov ernment, that would amount to $1.6 bi lion a year for the $1.6 trillion in annua sales of Treasury notes and bonds. "Th cost of passing improper legislation i tremendous," says bond consultan Leonard Santow, managing partner o

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Even rival government-securities firms that for years have railed against the privileges of primary dealers have lost some of their zeal for reform. Many fear that too much tinkering too quickly could create new and unexpected market inefficiencies. "You can rock the boat, but you run the risk of turning it over if you do too much at one time," says James T. Kinsella, senior vice-president of The Chicago Corp.

The dour outlook for reform would only change if an eagerly awaited joint study by the Fed, Treasury, and SEC on Treasury auctions due in mid-December reports a broad pattern of wrongdoing far beyond previous disclosures. But the betting is that the report won't be that incendiary. Furthermore, lawmakers, facing an election year, may be too preoccupied to consider a complex reform package.

SMALL CHANGE. Treasury has already introduced some modest reforms in the auction process. They make it easier for all registered securities firms and institutional investors to enter bids without going though primary dealers. In the past, only primary dealers could submit competitive bids for themselves and their customers, in exchange for the obligation to participate in auctions even when the market was sour.

At the first auctions under the new regulations on Nov. 5-6, bidding was thin, leading some Washington officials to wonder whether the primary dealers were boycotting the offering to protest the changes. But analysts say the real factor was uncertainty over whether the Fed would cut rates. Few customers took advantage of the option to bypass the primary dealers. "We're still sticking with primary dealers because we need to be assured of the creditworthiness of the people we're dealing with," says Roland M. Machold, director of New Jersey's Investment Div.

Congress isn't likely to step in to make broader changes anytime soon. The Senate passed a measure in September that makes false bids in Treasury auctions—the kind of conduct Salomon admitted—a violation of the securities laws. But the Senate doesn't want to consider anything else until it receives the study from regulators.

The most vocal critic of the auction process is Representative Edward J. Markey (D-Mass.) chairman of the telecommunications and finance subcommittee, who raised a ruckus with a bill that he hasn't yet introduced. It would give the government authority to oversee development of a system for disclosing bond-price information, which now is closely held by primary dealers. This has outraged the Fed and Treasury, which currently regulate the market, because Markey would give the SEC these powers. Says Markey: "We need a cop on the beat every day, not just an emergency-only SWAT team."

'We need a cop on the beat every day, not just an emergency-only SWAT team'

— REPRESENTATIVE EDWARD J. MARKEY

The SEC argues that it has far more experience than Treasury and the Fed in handling disclosure and surveillance issues. It could monitor the government market the way it now oversees securities of publicly held companies. "Should we reinvent the wheel?" asks SEC Chairman Richard C. Breeden.

But Markey's legislation, which would have to get through the Banking, Ways & Means, and Energy & Commerce committees, faces fierce opposition from the Fed and Treasury. The Fed, which relies on primary dealers to regulate the money supply, and Treasury, whose reform package was intended to preempt broader congressional reforms, bristle at Markey's suggestions of laxity. They claim that they have intensified efforts at enforcement and say Markey's proposals are fraught with peril for the government's debt financing. They argue that imposing a layer of bureaucratic rules on dealers might discourage bidding. And both agencies, which are loath to give up any of their power, worry that the SEC does not understand the government securities market. "Sweeping changes are, I believe, premature," Fed Vice-Chairman David W. Mullins Jr. told Markey's committee on Oct. 25.

AUTOMATION. The fighting on Capitol Hill won't slow the onslaught of technology. But technology, in turn, is not likely to unseat the primary dealers either. The Treasury and the Fed have accelerated plans to automate the Treasury markets. The first phase is set to begin in mid-1992 when small financial institutions that are not primary dealers will be able to bid electronically. The New York Fed is designing a similar plan for larger bidders.

The primary dealers launched a voluntary quotation system of their own—called GOVPX—in June. But some intended beneficiaries say that this is a largely half-hearted effort, noting that users cannot manipulate or save the data, and that it is not a trading system. "I view GOVPX as an attempt by the primary dealers to give as little data as possible to other people," says Robert Pozen, general counsel and managing director of Fidelity Investments.

But even if more price information becomes available and direct bidding becomes easier, investors may still have ways of bucking the system and bypassing primary dealers. Institutions worry that if they don't give primary dealers their buy orders, "when it comes time to sell, I might not get as good a bid," says Barbara Kenworthy, portfolio manager at Dreyfus Corp. With many other big investors sharing her concerns, and with reform efforts in Washington pretty much dead in the water, the primary dealers' hold on the market won't be loosened any time soon.

By Patricia Kranz in Washington

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BY GENE G. MARCIAL

WHAT'S IN JOHN TEMPLETON'S SHOPPING CART

Global investment guru John Templeton is as bullish as ever despite the miniquake that shook the market on Nov. 15. The slide, says the highly respected chairman of Bahamas-based Templeton, Galbraith & Hansberger, "has enabled us to execute buy orders for dozens of stocks at truly bargain prices."

Although Templeton concedes that the market is becoming more volatile as technology makes it easier to trade U.S. stocks around the world, he is convinced that stocks are not about to collapse. Indeed, he thinks U.S. equities are still the biggest bargains around and that the market's price-earnings ratio is cheap based on 1992 earnings and the fall of interest rates.

Next year, Templeton expects a snapback in GNP growth, along with "record earnings and record dividend yields." Clearly, investors are worried about the economy, he says. But the widespread pessimism, says Templeton, who oversees 83 worldwide mutual funds with total assets of $19 billion, breeds irresistible opportunities. That's especially the case with small stocks, where pessimism is suddenly rampant. Despite a sharp runup this year, the small stocks still have a lot of room to advance, says Templeton. He now sees compelling bargains in savings and loans, insurance, and transportation companies—all perceived as worrisome areas. Biotechs are out, he says.

LESS JUNK. Among S&Ls, Templeton likes First Financial Holdings, owner of First Federal Savings & Loan Assn. in Charleston, S.C.; ONBANCorp., owner of Onondaga Savings Bank in Syracuse, N.Y. (assets of $2.2 billion); and First Financial Management, which provides data processing services to banks and S&Ls and owns Georgia Federal Bank. Says Templeton Equity Research Director Mark Holowesko: "These S&Ls have high-quality assets and earnings potential of 15% to 20% annually in the next five years."

Another Templeton pick: Kemper, a major financial-services company engaged in life insurance, property-and-casualty, reinsurance, and investments. Its assets total $50 billion; its asset-management unit alone is worth $1.8 billion, or $30 a share, says Holowesko.

TEMPLETON'S TOP PICKS

Stock	1991 high	Recent price
ATLANTIC SOUTHEAST AIR		
Regional commuter airlines	$39	$34
FIRST FINANCIAL HOLDINGS		
Savings and loans	15	11
FIRST FINANCIAL MGMT.		
Financial data processing	47	42
KEMPER		
Insurance and finance	41	36
ONBANCORP.		
Savings bank	21	17
STOLT TANKERS & TERMINALS		
Worldwide shipping	29	19

DATA BRIDGE INFORMATION SYSTEMS INC

Kemper has been increasing the capitalization of its life unit and cutting junk-bond holdings to $1.1 billion, or 11% of invested assets. He sees Kemper's net jumping from 1990's 25¢ to $4.25 in 1991 and $4.80 in 1992.

Templeton is also high on Atlantic Southeast Airlines, a commuter airline with hubs in Atlanta and Dallas/Fort Worth. It has picked up a lot of business in the South after the collapse of Eastern Air Lines. "It's an earnings play in a consolidating industry," says Holowesko, who figures Atlantic will earn $6 a share by 1996, vs. 1991's $2.18. Templeton also likes Stolt Tankers & Terminals, which operates 90 transoceanic tankers. "It's a play on the industry's shrinking capacity and the expected rise in rates," he says.

INSIDER TRADING BE DAMNED

Would you touch the stock of a company whose chairman, secretary, and a former director are accused by the Securities & Exchange Commission of insider trading in the company's shares?

Believe it or not, some smart-money pros are buying shares of Shared Medical Systems—a company in a pickle. These investors argue that Shared Medical's stock is compelling despite the recently announced insider-trading charges against Chairman and CEO R.J. Macaleer, Corporate Secretary James C. Kelly, and former Director Clyde Hyde. The SEC alleges the trio knew that earnings had declined—and sold shares before the announcement. The company, which provides information systems to hospitals and health care companies, denies the SEC charges that the three sold stock in 1985 to avoid the expected drop in the shares.

One reason to get into the stock now, says one pro, is whispers of a "friendly buyout bid" from a major data processing company. With the stock down to 18 a share from 23 in September, it is a bargain, he explains. Some investors also note that the stock is an earnings-turnaround play. "Earnings and orders have been rebounding, and the company appears in a good position to benefit from efforts by hospitals to control their costs," says Jim Awad, president of BMI Capital. Shared Medical "is a leader in its industry, has a strong balance sheet with no debt, and isn't sensitive to the economy," he adds. Awad says the stock is worth 30 based on earnings alone. A takeover investor puts the buyout value of Shared Medical at $40 to $45.

ASK THE COPS AND FIREFIGHTERS

You won't catch Phil Donahue or Sally Jessie Raphael on Westcott Communications' television networks. But they may be the channels of choice of your neighborhood fireman or policeman. The reason: Many town and municipal police forces and fire departments subscribe to Westcott's satellite broadcast networks, which provide educational and training TV programs for specific industries. Already, some Street pros want to get into the act by buying Westcott shares. Not surprisingly, Westcott's stock has bounced from 6 a share in August to 9.

Rick Teller, senior vice-president for investments at Josephthal, Lyon & Ross in Boston, thinks Westcott is a "potentially strong growth company." He estimates that earnings this year will be 22¢ a share on projected sales of $29 million. Next year, he sees earnings climbing to 60¢ a share on estimated sales of $38 million. In 1993, when Westcott expects to set up new networks for the medical professions, it could earn $1 a share, says Teller.

Westcott's first network, geared to auto dealers, grew rapidly from 1986 to 1989. But the recession took the wind out of that market. Now, Westcott's two-year-old Law Enforcement TV Network, aimed at the police departments, is in an upswing, attracting 2,700 subscribers. And its newest network—Fire & Emergency TV Network—aimed at firefighters and emergency medical personnel, "has been a success beyond the company's expectations" with 1,000 subscribers since September, he says.

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A WAKE-UP CALL FOR BELL ATLANTIC

EO Raymond Smith is out to smash its bureaucratic mindset

The walls of a Bell Atlantic Corp. conference room are covered with brown wrapping paper. Diagrams nd flow charts describe the marketing epartment's hierarchy and functions. larkers in hand, executives zestfully ross out steps in product-development ycles, slash positions, and question oals. Each day, others wander in and dd their graffiti. "Is this really neces-ary?" queries one anonymous contribu-or, pointing to a staff unction. Before long, he writing is on the all: The department eeds to be dramatical-pared down.

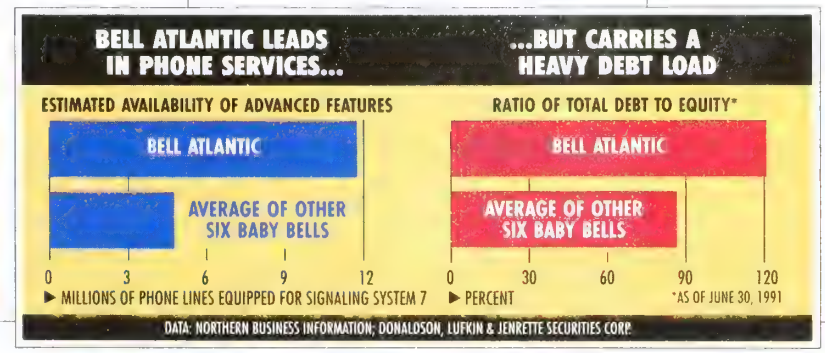
Welcome to the Bell tlantic Way—a man-gement scheme to cut osts, spur salesman-hip, and promote inde-endent thinking at the $12 billion, Philadelphia-based regional Bell phone company. All seven Baby Bells are striving to break out of their bureaucratic ways, but under Chairman Raymond W. Smith, Bell Atlantic's program stands out for its sheer pervasiveness. In the past two years, Smith has sent 20,000 managers through a 2½-day training program to learn the Bell Atlantic Way. Nearly 60,000 other employees will get similar training starting in 1992. True believers wear "Coach Me" buttons, an invitation to co-workers and even subordinates to offer advice.

Smith, 54, became chief executive in January, 1989, and chairman that July. Since then, he has become thoroughly steeped in the ways of motivational management. The Carnegie Mellon University engineering grad keeps a plaque on his desk reading "Be Here Now," a reminder to remain focused on the business at hand. He encourages employees to carry a blue poker chip, as he does. That's to keep them working on blue-chip priorities first, leaving the reds and whites for later.

STAGNANT GROWTH. These tricks may sound hokey, but Smith says they're helping transform his executives into the kind of managers who can compete in all sorts of businesses. Like other regional phone companies, Bell Atlantic is struggling to launch new businesses as its old ones slow. Bell Atlantic generated 88% of its revenue last year from local phone companies in Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia. But growth is nearly stagnant in local calling, and large customers are bypassing local carriers to connect directly with long-distance phone companies. Competitors are moving in on short-haul long-distance service, coin telephones, operator services, and yellow pages. The results are clear: For the nine months ended Sept. 30, Bell Atlantic's net income rose a scant 1.4%, to $1.09 billion from $1.08 billion a year earlier, and revenue actually dipped, to $9.18 billion from $9.19 billion.

Getting out of that rut will require a far more aggressive approach—wringing more income out of local phone service and a smarter grasp of new businesses than the company has shown in the past eight years. Smith is asking employees to work on these corporate goals, instead of just fulfilling the narrow, bureaucratically defined objectives that marked the old Bell system. That message is unrelenting, expressed in company newsletters, training sessions, and ubiquitous "Bell Atlantic Way" posters. Says one former company executive of Smith: "Changing a company's culture takes either a crisis or a fanatic. He's a fanatic."

The new culture is already apparent in the executive suite. To set an example, Smith turned the executive dining room into an employee cafeteria. He also dispersed top brass



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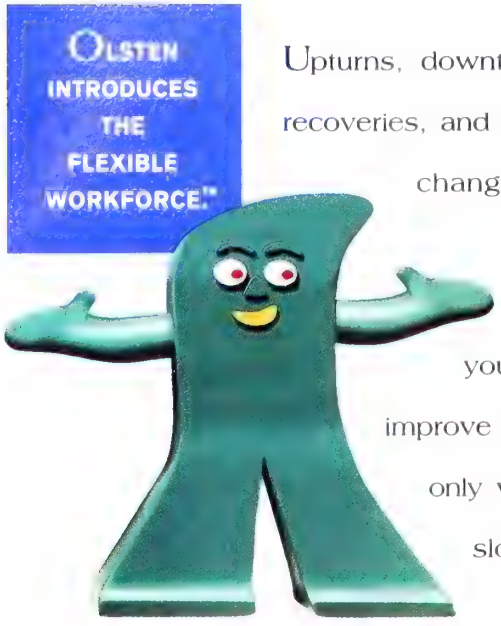

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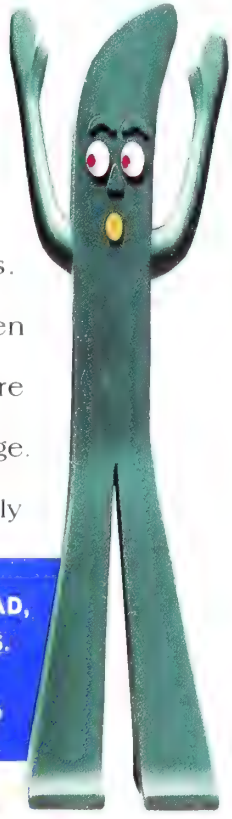

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om the executive floor and ationed them with the oups they oversee. "What id of message do we send nployees if we're all on e same floor and lunch in private dining room?" ith asks.

While bottom-line results n't be apparent for some time, ith's efforts rate cautious praise om an important constituency: regula- rs. "The effort, it seems to me, is con- ousness-raising," says David Rolka, a ember of the Pennsylvania Public Util- Commission. To be more responsive the market and more competitive, says, "These types of programs are cessary."

PRIT DE CORPS. The thrust of the Bell lantic Way, developed with the help of s Angeles-based Senn-Delaney Lead- ship Consulting Group, is to foster rker participation at all levels. At a ssion for Bell Atlantic Mobile Systems pervisors, a blindfolded employee is d to hit a target with a velcro-tipped rt. At first, no one lends any guidance. en, people shout directions that help e employee hit the target. Such drills e more motivational than instructional. deed, employees whose esprit de corps pears to be flagging sometimes are vised to attend a "reinforcement" ssion.

To some employees, it all seems a bit g Brotherish. One network manager, o spoke on condition of anonymity, ys he's considering early retirement to oid wasting time on "silly programs." for unionized workers, who won't ex- rience the Bell Atlantic Way until next ar, one 11-year veteran says he doubts 'll ever be allowed to "coach" his own ss, calling the program "another at- npt to brainwash employees." That nd of attitude exasperates Smith. ome people don't want to change un- r any circumstances, but this isn't go- g to go away," he vows.

There are early signs of success. For ample, the brown-paper exercise, hich was developed with the help of e MAC Group Inc., a consulting firm in mbridge, Mass., has aided in corpo- te restructuring by making the em- oyees involved feel more like par-

COACHING

Bell Atlantic true believers sport these buttons to encourage others—mainly subordinates—to offer them advice without fear of retaliation

ticipants than victims. Without such measures, "We have a tendency to dig our heels in and defend our territory," admits Graham Ragland, assistant vice-president for compensation and benefits. Ragland actually scratched his own job off the wall last summer—knowing that a new one would be found for him.

When it comes to broad corporate strategies, it's harder to draw connections between the Bell Atlantic Way and the company's performance. Its basic strategy has been to invest heavily in its network. By the end of 1991, 90% of its phone lines will be equipped with Signaling System 7, a data-messaging network that automatically sets up calls and permits new services, such as caller I. D., call blocking, and automatic re-dialing. Last summer, it was faulty Signaling System 7 software from DSC Communications Corp. that led to major phone outages in Bell Atlantic's network in Washington, Pittsburgh, and elsewhere. By plowing hundreds of millions of dollars in the network, Smith hopes to offer new phone features and services that will raise network revenue growth to a level of 4% to 6%, rather than the 1% to 2% the company could otherwise expect.

BIG LOSSES. But Bell Atlantic also holds another, not so laudable record, among the Bells. It has the highest debt ratio (chart, page 133), thanks to forays into financial services and real estate, an employee stock-ownership plan, and its part of a $2.4 billion purchase—with Ameritech Corp.—of Telecom Corp. of New Zealand. Short-term debt, at 32% of equity as of June 30, was twice the average of the other Baby Bells, says Marion M. Boucher, an analyst at Donaldson, Lufkin & Jenrette Securities Corp. Bonds issued by Bell Atlantic Capital Funding Corp. still carry an AA- rating from Standard & Poor's Information Group. But Boucher says they may be overpriced given the risks. "People have thought of these phone companies as underleveraged, conservative. That's no longer the case," she says. "Often, when you become adventuresome, you stumble."

Bell Atlantic already has stumbled in financial services and real estate. Even as the real estate market was stalling in early 1990, the company was predicting that it would double its $650 million portfolio within five years. But Smith recently told analysts that the company will gradually get rid of almost all real estate beyond what it uses itself. He said it also is shrinking its computer-leasing business, which at one time had more than $1 billion in assets. The company doesn't break out the profitability of individual business units, but analysts say real estate and financial services have tied up enormous amounts of capital while generating lackluster returns and heavy write-offs.

Now, Smith says new businesses will be closer to the core business—cellular networks and ventures with foreign phone companies. Smith ended the company's self-imposed ban on buying cellular properties outside of its home territory in September, when the company agreed to buy New York-based Metro Mobile CTS Inc. for nearly $2.5 billion in Bell Atlantic stock and assumption of debt. The acquisition puts Bell Atlantic roughly sixth in size among cellular operators nationally.

BLUE CHIPS

Employees are urged to keep one of these poker chips in a pocket as a constant reminder to stay focused on their most critical task of the moment

Recently, the Bell Atlantic Way has been applied to the company's overseas push—with mixed results. Teamwork helped in New Zealand: Instead of leaving the bidding up to a small international team, the people who run the domestic network pitched in. But Bell Atlantic has fallen short in other bids for phone companies in Eastern Europe and Latin America, most recently losing the auction for a piece of the Venezuelan phone company, CANTV.

As Smith strives to steer Bell Atlantic in new directions, his biggest challenge will be to keep employees from slipping back into comfortable Bell habits. "We're still dealing with the monopoly mindset," the chairman concedes. If the Bell Atlantic Way does help the bottom line, however, it may not be long before Nynex Corp., Southwestern Bell Corp., and the rest start tacking brown paper up on their conference-room walls, too.

By Julie Amparano Lopez in Philadelphia

VELCRO DARTS

To build teamwork, blindfolded employees try to hit a target with the darts—first on their own, then with guidance from their colleagues

VENTURE CAPITAL

EVEN HOTSHOT STARTUPS ARE FEELING THE CHILL

Fear of a shakeout is making for less venturesome capital

Michael D. Goldberg is the proud father of a six-month-old girl—and a three-year-old company. He boasts about his daughter. But when talk turns to how Access Biotechnology Inc., a company in South San Francisco that arranges clinical trials for the biotech industry, recently snapped up $2 million in venture capital, Goldberg turns sheepish. The reason: Amid a lot of doom and gloom over how hard it is to pry loose venture dollars these days, Goldberg raised the money in just three months. "I feel like my wife does when other women ask her how labor went, and she says 'five and a half hours,'" he says.

Indeed, it's a rare company that can slide so easily through the venture-capital wringer nowadays. Last year, U.S. venture firms handed out $1.9 billion, a head-spinning 43.4% falloff from 1989, reports Venture Economics Inc., a Needham (Mass.) consulting firm. The future looks worse. So far this year, venture firms have attracted just $870 million from new investors—vs. 1.8 billion last year. Insiders blame the slump largely on the scores of iffy venture outfits that sprang up in the early 1980s and threw money at virtually anyone spewing technobabble. While only a few of those firms have gone under, they've generated disappointing returns for years. Now, asserts Gib Myers, a general partner with the Mayfield Fund in Menlo Park, Calif.: "They've run to the end of their funds—and they won't get refunded."

SHARPER EYES. In short, a good old-fashioned shakeout may be starting. As befits such a development, the venture industry should emerge stronger once weaker firms are weeded out. Indeed, despite the slump, optimists like Myers insist that there's plenty of money for good companies: This year, for example, the Mayfield Fund will more than triple the $7 million it laid out to new companies in 1990. And those who believe that venture capital's role as the incubator of technological growth isn't in jeopardy point to hot new areas such as wireless computer networks and "green" software that tracks environmental contamination. They also note this year's record amount raised in venture-backed initial public offerings (chart).

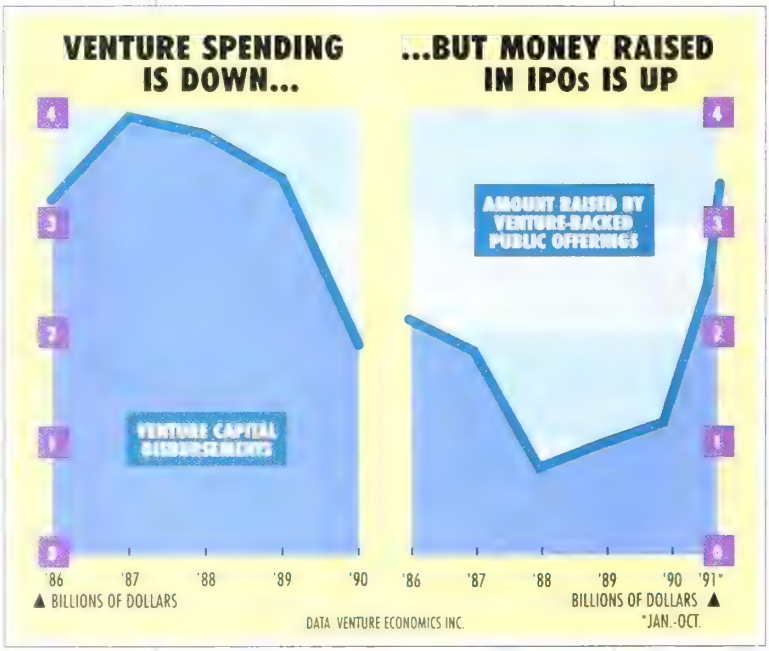
Nevertheless, the freewheeling days are over—for now. The fiscal crunch has forced changes in the way even the strongest venture firms operate, prodding them to bring a greater scrutiny to deals. In recent years, they've hired more experts in such key industries as biotechnology and software—then demanded more unique ideas, more knowledgeable entrepreneurs, and a more thorough evaluation of potential markets before opening their wallets. Such changes may mean that fewer new companies will make the grade. But if an enterprise passes muster, venture capitalists are eager to bankroll it—as Access Biotechnology's story illustrates.

The pullback in spending has several other symptoms. Many venture firms, for instance, are circling their wagon around existing portfolios. In the pas Boston-based MVP Ventures would hav turned to other firms to help raise fund as its current crop of companies gre and needed more financing. But with t day's capital crunch, says partner Jon than J. Fleming, most of that financin now has to be done internally—leavin little money for new startups.

As venture firms stop trying to be a things to all people, many have also b gun serving only companies at specif stages of growth. Some, such as May field, shy away from later financin rounds, where capital demands rise a companies take on workers and gear u for full-scale production. Others, such a TA Associates in Boston, try to avoi risky early rounds of financing. Eac dollar there buys a bigger share of th pie, but the risk of a startup's slouchin into oblivion is high.

GREATER PRESSURE. So far, on a percen age basis, the disbursement falloff i split almost evenly between early an later stages—indicating no clear prefe ence for either philos phy. But because the la er growth stages typicall require more than thre times as much money a the early rounds, the f nancial pressure is grea er on more mature firms The ebullient IPO marke has taken some of th heat off. Some biotec companies have eschewe venture financings tha might raise $5 million i favor of public markets where they have raked i $30 million overnight notes Cynthia Robbins Roth, editor of *Bioven ture View*, an industr newsletter.

Few experts, however think the IPO market wil remain hot. That mean later-stage financing could be even harder to come by. Mor and more, growing companies turn t large corporations, which not only ma provide big chunks of cash in exchang for marketing and distribution right but even change venture capitalists minds. Neurogenetic Corp., a four-year old biotech company in Paramus, N.J. found how crucial a corporate partne can be when it sought to raise $7.5 mil lion last May. Despite its unique gene splicing techniques that promise to hel deliver drugs precisely to where they'r needed in the brain, the company found venture capitalists wary until it signed a



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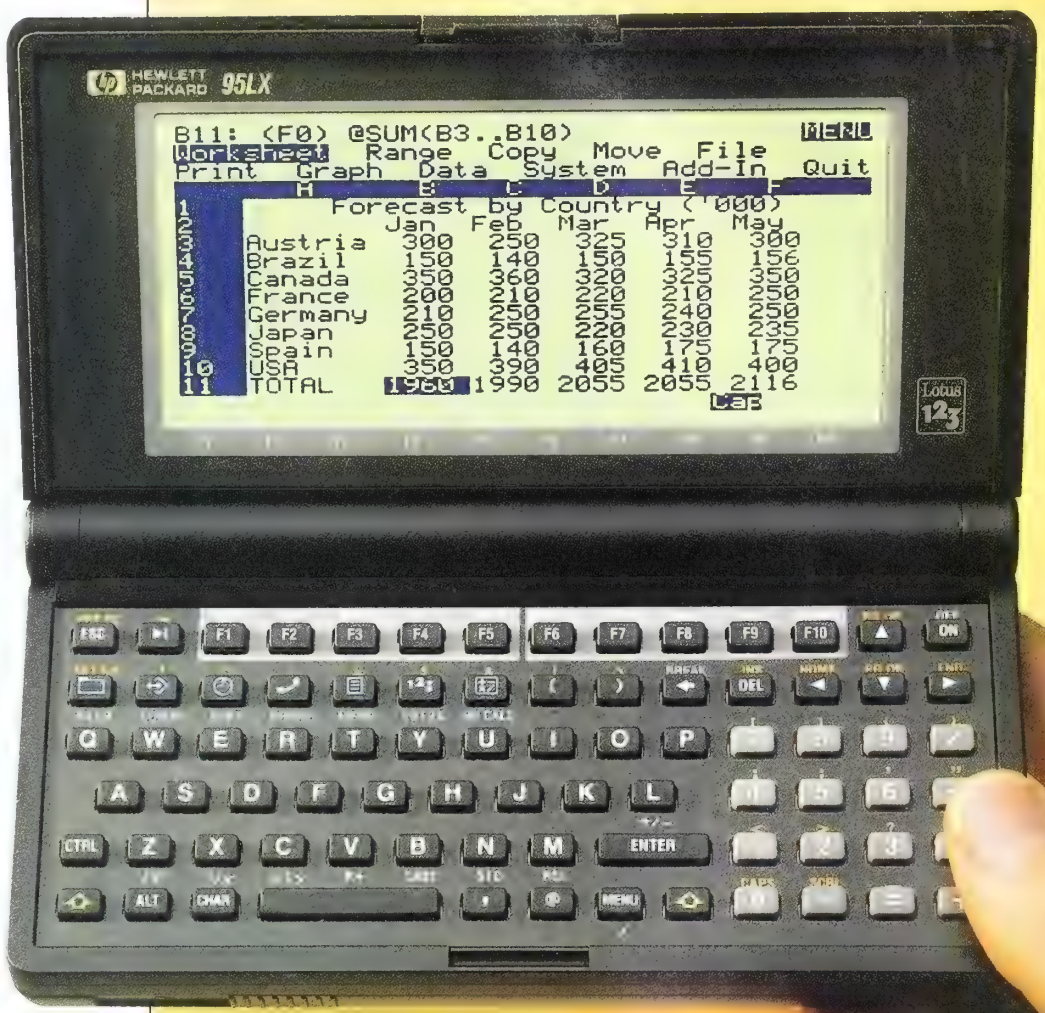

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research and development deal with Eli Lilly & Co. Suddenly, such big hitters as ABS Ventures and New Enterprise Associates also took the plunge, and Neurogenetic ended up with $9.3 million.

Large companies such as Lilly have long pumped money into hot young companies. Now, this trend is growing as the high costs of research make it harder for big companies to do everything in-house and the drop in the venture pool makes small firms more amenable to these sometimes constricting alliances. Recently, startups have looked to big Asian companies, which are often easier to work with than U. S. counterparts. "They've got money, they're patient. They're very nice to deal with. And the cost of capital is lower," says Mayfield Fund's Myers, who has helped small U. S. companies forge links with Toshiba Corp. and Sumitomo Metal Mining Co.

NARROWING DOWN. For venture capitalists, adjusting to the new, leaner climate is just part of the battle. They must also keep up the old hunt to identify both hot new areas and the companies that might, in a few years, reach the ranks of the 25 fastest-growing enterprises (table). In the past year, the broad categories of what's hot haven't changed much: software, biotech, communications. But more important than the categories are the distinctions within them.

In software, for example, data-base programs have become passé. The new darlings are products such as SitePlanner from ConSolve Inc. in Lexington, Mass., which helps managers of hazardous-waste sites visualize contamination patterns and predict cleanup costs. Venture capitalists today also shy away from biotech companies developing costly new drugs. They prefer to back companies working on ways of delivering drugs more precisely to where they're needed—increasing their effectiveness and avoiding side effects. And in communications, forget about cellular phones. Now, it's microcellular: pocket-sized phones or systems that link computers over wireless local-area networks.

Of these categories, software boasts the widest appeal. It isn't just that computers are pervasive. Given today's economic blues, venture firms find that it typically requires less than $5 million to take a company from seed stage to a product, vs. tens of millions for hardware outfits, says Ann L. Winblad of Hummer-Winblad Venture Partners, a software-only firm in Emeryville, Calif. True, money is still there for more costly ventures if they're hot enough. But that money is getting hard to find.

By Robert Buderi, with Gary McWilliams, in Boston, Joan O'C. Hamilton in San Francisco, and bureau reports

HIGH-TECH HOTSHOTS

This table ranks the 25 fastest-growing startups in the Corp Tech data base of 30,000 high-tech companies. It includes private companies that were formed during the 1980s, have more than 100 employees, and receive at least 75% of their revenues from high-tech products. The companies are ranked according to their percentage employment growth in the past year. The data are provided by Corporate Technology Information Services Inc., in Woburn, Mass., and published in that company's *1991 Corporate Technology Directory and Database*

RANK	COMPANY PRINCIPAL PRODUCT(S)	ESTIMATED SALES IN MILLIONS OF DOLLARS	NUMBER EMPLOYEES	YEAR FOUNDED	AVG. ANNUAL JOB GAIN	LAST YEAR'S JOB GAIN
1	**CUMULUS** Cleveland Microcomputers, memory boards, and removable hard-disk drives	NA	275	1986	45	358%
2	**ARTISOFT** Tucson Hardware and software for local-area networks	$20	205	1982	20	122%
3	**READ-RITE** Milpitas, Calif. Inductive thin-film recording heads for Winchester disk drives	$73	1,000	1983	111	100%
4	**QUALCOMM** San Diego Satellite-based mobile communications systems	$47	650	1985	92	100%
5	**AUSPEX SYSTEMS** Santa Clara, Calif. File servers	$15	118	1987	23	93%
6	**PARADIGM TECHNOLOGY** San Jose, Calif. Static random-access memory chips	NA	150	1987	30	87%
7	**ALTON GEOSCIENCE** Irvine, Calif. Environmental consulting, hazardous waste investigation and remediation services	$11	150	1981	13	87%
8	**ECOTEK** Erwin, Tenn. Environmental services	$5	108	1987	21	80%
9	**SYNOPSYS** Mountain View, Calif. Electronic design automation software	$20	215	1986	35	70%
10	**INTERNET SYSTEMS** Chicago International banking software	$10-25	290	1981	26	70%
11	**TANON MANUFACTURING** Milpitas, Calif. Contract manufacturing services	NA	300	1982	30	66%
12	**ADVANCED INTERVENTIONAL SYSTEMS** Irvine, Calif. Excimer laser coronary angioplastic systems	$8	125	1986	20	66%
13	**ULTRA NETWORK TECHNOLOGIES** San Jose, Calif. High-performance networking systems	$18	141	1986	23	65%
14	**INTERNATIONAL POWER DEVICES** Brighton, Mass. DC-to-DC converters	$5.5	160	1985	22	60%
15	**DATALOGIX INTERNATIONAL** Valhalla, N.Y. Process control software	$16	200	1981	18	60%
16	**FRAME TECHNOLOGY** San Jose, Calif. Desktop publishing software	$27	250	1986	41	59%
17	**PROTOCOL SYSTEMS** Beaverton, Ore. Portable vital-sign monitoring equipment	$13	150	1986	25	59%
18	**EPOCH SYSTEMS** Westborough, Mass. Storage management systems for Unix-based networks	$12	131	1986	21	59%
19	**GUPTA TECHNOLOGIES** Menlo Park, Calif. Networking software for PCs and PCs hooked to minicomputers and mainframes	$14	140	1984	17	57%
20	**BIOSYM TECHNOLOGIES** San Diego Molecular modeling software	$23	170	1984	21	54%
21	**MICROWAVE RADIO** Lowell, Mass. Microwave radio communication systems	$30	150	1986	25	50%
22	**UNITED INTL. ENGINEERING** Albuquerque Weapons systems test and evaluation services	$12	200	1983	22	48%
23	**IMRS** Stamford, Conn. Business and executive information systems software	$34	250	1981	22	47%
24	**NETRIX** Herndon, Va. Wide-area networking equipment	$13	125	1985	17	47%
25	**DASTEK** San Jose, Calif. Thin-film magnetic recording heads	NA	800	1987	160	45%

NA = Not Available

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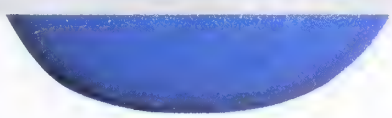


Developments to Watch

EDITED BY OTIS PORT

A NEW TECHNIQUE FROM THE OAK BRIDGE BOYS

The covered bridges still in use around the country, some built more than a century ago, bear eloquent testimony to the durability of wood. That's one reason researchers at Pennsylvania State University figure wooden bridges are due for a comeback.

Working with the Pennsylvania Transportation Dept., the researchers designed a sleek oak bridge that opened to traffic in November near the campus, on Route T-330. Its 34-foot-long deck is a lamination of boards 8 to 12 feet in length, a parquetlike technique that could span up to 90 feet, says Harvey Manbeck, professor of agricultural engineering. The $260,000 structure proved it could support modern traffic when two trucks, each weighing 37 tons, were driven onto the bridge. If the lumber is treated with creosote, adds Manbeck, wood bridges should outlast steel or concrete designs by as much as 20 years. Moreover, the Northeastern states that produce most of the nation's oak, maple, and poplar are growing twice as much timber as is being harvested, so the raw materials are in abundant supply.

HUM A FEW BARS, AND I'LL SYNTHESIZE IT

Artificial neural networks seem almost as enchanted by music as their real counterparts inside human heads. Shortly after research on neural nets kicked into high gear in the 1980s, scientists discovered that these brainlike circuits can learn music just by "listening" to various examples. The network quickly begins adjusting its internal connections, becoming better and better at handling musical patterns.

Now, professional musicians and university scientists believe that neural nets may also be creative. David L. Wessel, head of the University of California at Berkeley's music technology center, has a so-called listening assistant that spurs improvisation: It snatches a fragment of a jazz performance, elaborates on it, then injects the new structure back into the performance. After Russell C. Eberhart, a biomedical researcher at Johns Hopkins University, put his neural net on a diet of folk songs, it synthesized an original tune. And next year, Japan's NEC Corp. expects to unveil a computerized *karaoke* that will let nonmusicians compose their own scores: Just hum the melody, and the *karaoke* will add harmony.

THIS POTENT PAINKILLER MAY DO THE JOB WITHOUT DRAWBACKS

Morphine and other opiates offer critical relief for patients in pain. Unfortunately, these drugs can also cause a number of unwanted side effects, including addiction. Now, scientists at the University of Arizona may have found a painkiller without secondary problems.

A team led by chemistry professor Victor Hruby has designed an artificial molecule that attaches just to the brain-cell receptors that mitigate pain. Injected into animals, the molecules don't seem to trigger the heart or lung difficulties associated with opiates. Nor is there any increased tolerance, a sign of addiction. As a result, the molecules may also prove superior to Methadone as a treatment for drug addiction, since Methadone is itself often addictive.

Curing addiction isn't simply a matter of providing addicts with a substitute drug, cautions Hruby. While some behavioral symptoms associated with addiction seem to be reversed by the molecule, he adds, "we don't know what 'craving' means in chemical terms." Still, for alleviating pain, Hruby hopes to begin human trials within two years.

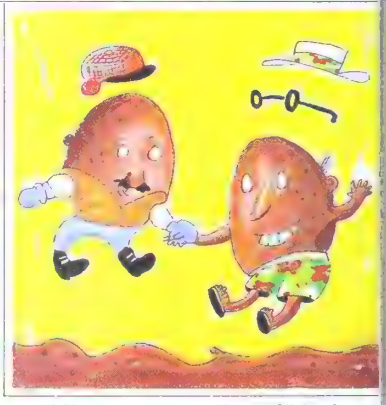
AN EARLY-WARNING SYSTEM AGAINST COMPUTER INVADERS

An electronic sneak attack could happen almost any day, according to computer-security experts. Virtually any computer with a telephone link is highly vulnerable. Even determined teenagers, armed with a personal computer and a modem, regularly get past the usual safeguards.

And while it's hard enough to shield a single computer against intrusion, it's all but impossible to protect computer networks. That's because intruders can bounce from computer to computer on the network, never making enough unsuccessful stabs on any one machine to raise an alarm. For example, the Internet network, which links 300,000 government, university, and commercial computers in 35 countries, has been the target of a "continuous stream" of attacks, says Ira W. Morrison, a researcher at Lawrence Livermore National Laboratory.

But hackers may soon have a tougher time breaking into networks. A project team headed by Morrison is developing a security package that, for the first time, can detect interlopers as they "rattle the doorknobs" on a series of computers. Thus far, tests of the approach have been so promising that Livermore hopes to install it at an Air Force site by next July.

GIVING 'SOFT' CHOCOLATE A HARDER BITE



Nestlé, Mars, Hershey, and other chocolate makers have a dickens of a time satisfying your sweet tooth. The problem is that cocoa beans grown in cooler climates don't measure up to their hot-weather cousins, of which there just aren't enough to go around. The cocoa butter extracted from "cool" beans is usually too soft, so extra cocoa butter—the world's most expensive edible fat—must be added to get the proper taste and texture.

But researchers at Pennsylvania State University are working on a cheaper way to assure lip-smacking quality. A team headed by food chemist Paul S. Dimick has uncovered one secret to more uniform chocolate. It's a special "seed crystal" with a high melting point—twice that of the surrounding cocoa butter. Now that he has found this seed, Dimick next wants to figure out how to coax more to form as the chocolate cools. Then, making chocolate with cool beans will be a sweet deal.

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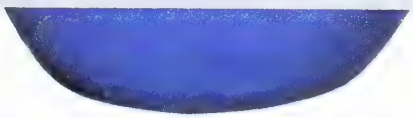


AUTOS

HIRSHBERG: HIS TEAM DESIGNS COMPUTERS, TOO

IT STARTED WITH AN EGG

From a designer's doodle came the new Infiniti, born in the U.S.A.

It's long and low and rides close to the road. The new J30 Infiniti, due out this spring, echoes the classic Jaguars of the '50s. Compared to the Euro-look of the Infiniti Q45, with its high rear end and stubbier look, Nissan Motor Co.'s $35,000 J30 looks positively feline.

The idea of a Jaguar-inspired Japanese auto wasn't born in London or Tokyo. The J30 sprang from the doodling pad of a young American designer working in San Diego. There, in the fall of 1988, Doug Wilson scribbled an egg crossed by an arched line. Wilson worked at Nissan Design International Inc., the Japanese auto maker's Southern California design shop. His sketch became the organizing principle behind NDI's sloping retro concept for a new midrange Infiniti.

But that was only the first step. The American Nissan designers had to compete against the home team in Tokyo. The U. S. team had already lost out to the more conservative Japanese for the design of the Infiniti Q45. This was going to be round two.

The design derby heated up in January, 1989, when NDI shipped its first quarter-scale J30 model to Nissan headquarters. The reaction from Japan surprised the NDI designers. "Frankly, we thought that in a country that loves the wedge, the fight would be over the rear of the car," says Gerald P. Hirshberg, design vice-president at the San Diego studio. No quarrel there: Nissan's Japanese executives liked the low, gently sloping back end instead of a high haunch. But they hated the front.

The rejection taught Hirshberg an important lesson about cultural differences in visual perception: When Westerners conjure up an image of a car, he says, it's a side view. With the Japanese, it's the front. "The Japanese read personality and expression into the 'face' of t car," he says.

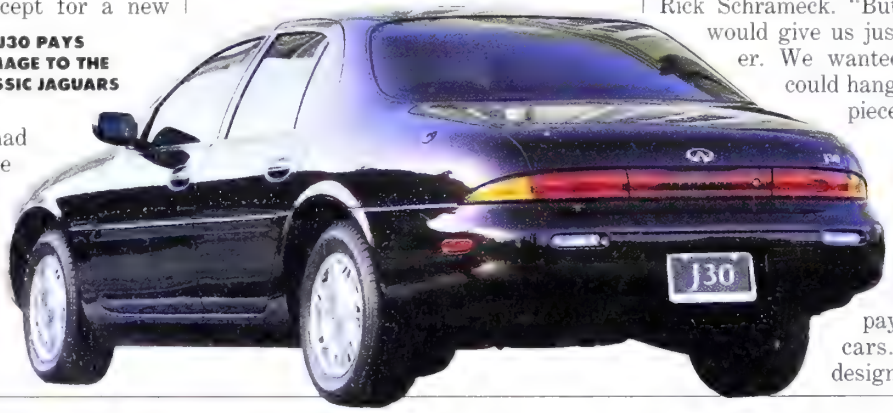
All the negotiations between Tok and San Diego centered on whether t "eyes" were sleepy or awake, a whether the "mouth" gesture was a propriate. "We don't even think of hea lights as 'eyes' or the grill as 'mouth,'" Hirshberg says. In the en San Diego beat out the Tokyo team a got to do the Infiniti—after a compr mise: The headlights and grill were rec signed to make for bigger, more expre sive "eyes" and a smaller "mouth."

While the J30 is the most ambitio project yet for Hirshberg's team, it just the latest in an impressive series designs to come from Nissan's America studios. With the arrival in 1992 of t new Stanza, to be built in Smyrn Tenn., and the Ford-built Quest miniva which will be sold by both Nissan a Lincoln-Mercury dealers, fully half the models that Nissan markets in t U. S. by the end of next year will ha been designed by Americans.

That's a record that not one of t dozen design studios that foreign ca makers have set up in Southern Califo nia can come close to matching. Nor ca they boast products other than cars: Ni san's San Diego shop is, in fact, the on car-company design studio in the wor that accepts outside commissions. "It funny that no one else does it," Hirs berg says. "It's such an obvious sour of creative ideas."

EXPECT THE UNEXPECTED. The practi has imbued the studio with a diversity experience that translates into subtle y significant differences in all it design Outside clients love it as a place to tu for the unexpected. RDI Computer Corp for example, hired Nissan Design to cr ate a dramatically different looking co puter. The result, a $9,000 portable eng neering workstation, has a series undulating surfaces, rather than t simple geometric shape of most laptop "Normally we would have gone to som one like frogdesign [the prominent Si con Valley studio]," says RDI Presider Rick Schrameck. "But we figured tha would give us just another compu er. We wanted a computer w could hang on the wall like piece of art."

Outside commi sions account fo 5% to 10% NDI's work Doing thi kind of produc design has a rea payoff in designin cars. Traditional ca designers start with th



THE J30 PAYS HOMAGE TO THE CLASSIC JAGUARS

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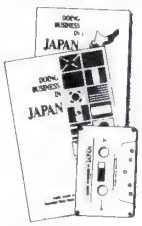

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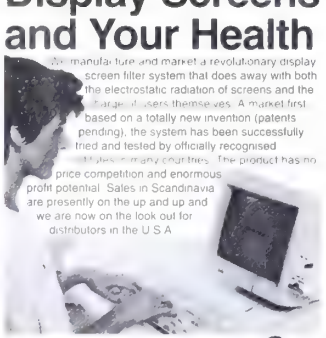

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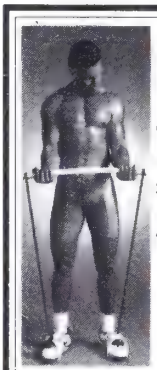

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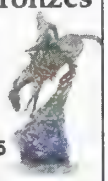

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Design

basic form of an automobile and a details such as headlights and door ha dles as styling supplements, almost afterthoughts. "We don't immediate start drawing cars," Hirshberg say "We sit around and think about t product and ask questions about i functions. It forces you into a world relationships where small things are important as the big shapes."

Even before he founded Nissan's Ca fornia studio in 1980, Hirshberg, 52, ha made his mark at General Motors Cor Just three years out of college, he b came Buick's youngest chief design ever. "He never was a car nut like th rest of us," recalls Charles M. Jorda vice-president in charge of GM's desig staff. "He didn't draw wild sketches b approached things with a certain amou of thought and analysis." Says Hirs berg: "Detroit represented everything loathed about American design, the e thetics of excess."

TURNING POINT. Hirshberg's first su cesses at Nissan were the 1986 Har body truck and the 1987 Pathfinder. Jeeplike sport-utility vehicle. Unusu features such as trapezoidal rear ver windows were used to accommodate th Pathfinder's roll bar. The vehicle ha achieved an almost cultlike following.

NDI first got noticed by the automoti world with its 1987 Pulsar NX. It was bizarre little car, easily transforme from a sporty coupe to a convertible wagonback with a series of interchang able tops. Modularity was the produ designer's answer to the auto designer question: How do you get a single car t serve a number of functions?

Critics raved, and it won major desig contests, including the Japan Car of th Year award, Nissan's first ever. It con pletely shook up the Tokyo-based desig staff. Experts contend that the Pulsa marked the turning point in Nissan sty ing, from a well-deserved reputation fo boxy, boring cars to its current stylis lineup. "Nissan's American studio clear significance is its ability to guid Japanese stylists toward designs mor appealing to American tastes," say Christopher W. Cedergren, senior vic president at market researcher AutoPa cific Group.

That ability will be tested with the J3 Infiniti. So far, NDI has attracted th attention of other designers with a num ber of interesting cars and other proc ucts, including a tiny black audio twee er, a glossy blue outboard motor. sterile white IV pump for hospitals, an the deck of a 105-foot motor yacht. Bu none of its efforts has translated into runaway marketing hit. The J30 ma change all that.

By Larry Armstrong in San Dieg

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Real Estate

SMOOTHING THE WAY TO A HOME MORTGAGE

Tantalized by current rock-bottom interest rates, home buyers have been swarming into the housing market. But at the same time, foreclosure-wary banks have been setting more rigid lending rules. The result: A lot of near-buyers are stalking away from dream homes disappointed.

Buyers new to the mortgage game—and even those reentering the market after many years—may not realize they have an ally at hand. Rather than risk a thumbs-down from their local bank, they should hightail it to a mortgage broker.

ADVOCATE. Mortgage brokers can't help every person who applies for a loan. But they can often tip the scales in your favor. Since most mortgage brokers maintain relationships with numerous lenders—each with its own set of underwriting guidelines and credit requirements—you automatically multiply your chances of getting a loan. The broker acts as your advocate, walking you through the application process so you're not rejected or held up on minor technicalities. Brokers may even secure you more favorable loan terms with waived fees or reduced points.

Creative mortgage brokers can figure ways to untangle a buyer's qualifying snags, such as poor credit or a too-short work history. "If your credit history was marred because of a medical problem or divorce, or if the bad credit was limited to a specific time frame, all you may need is a well-documented explanation letter," says Deborah Reyes, president of Capital American Mortgage in Miami.

Possibly the most impressive thing a mortgage broker can do is to humanize the lending process, which has evolved into a marathon for number crunchers. "If I think a buyer who doesn't quite meet the guidelines deserves a loan, I'll put my reputation on the line to sell a package to a lender," says Pat Tenney, president of MidWest Financial Mortgage Services in Lake Havasu City, Ariz.

Leslie Mauer and her fiancé, Greg Keefer, both 20, had trouble getting a lender even to look at their loan application. New to Lake Havasu City, neither had a substantial work history. To complicate matters, a high percentage of their down payment came from selling assets which they had trouble proving they owned.

HORSE TRADE. In the end, voluminous documentation—and mortgage broker Tenney's dogged efforts to convince the lender of the couple's dependability—won the day. "Where they really got hung up was on the source of the downpayment," says Tenney. "Leslie's portion of the downpayment was from the sale of a horse she had owned but had no receipt for, since she had purchased it when she was a young girl. To prove the horse was hers, Mauer got her trainer to write a letter and sent the bank press clips mentioning her and the horse.

Mortgage brokers can also speed up the loan process for regular folks with unexceptional applications. A broker saves you time initially by giving you a candid assessment of what you can afford. And since the broker has kept abreast of the latest loan packages and interest rates nationwide, he or she can identify an array of products available to you. Then, the

oker packages your applica-
n with the necessary back-
documentation so the
ansaction proceeds as
oothly as possible. The bro-
also identifies rough spots
you can be ready with an-
ers or gather additional
cumentation for the bank.
VEATS. Even when you get
ned down, a mortgage bro-
hastens the process of re-
plying. The broker can get
application package back
d take it somewhere else
you, saving you the hassle
tracking down new verifi-
ions, new credit reports,
d new title histories.
While most mortgage bro-
s are on the up-and-up,
yers should be wary of
om they choose. The mort-
ge-brokerage industry has
y been regulated within
past five years, and un-

CHOOSING A MORTGAGE BROKER

- Get advice from real estate agents and other buyers
- If you have a spotty credit history or other problem, make sure the broker has handled cases like yours successfully
- Pick someone who asks probing questions so you're not rejected or held up by the bank on minor technicalities
- Make sure the broker can offer you a range of banks
- Beware the broker who guarantees you'll get a loan; you might end up with the wrong kind for your needs
- Have your attorney go over any contract with the broker or any mortgage before you sign

DATA: BW

scrupulous operators, who misrepresent or oversell their services, exist. "Be sure you understand the implications of each loan package you apply for," warns Keith Gumbinger, media coordinator with HSH Associates, a mortgage-data concern in Butler, N. J. "Just because someone says they can get you a loan, that doesn't mean that's the type of loan you want."

The best way to find a mortgage broker is through referrals by real estate agents and other home buyers. A call to licensing departments in the 30 states that have them, the Better Business Bureau, or the local mortgage brokers association, will let you know whether the broker you've chosen is reputable. While there is no national certification required, many mortgage brokers have earned the title "certified mortgage consultant" from the National Association of Mortgage Brokers (NAMB).

Normally, mortgage brokers collect their fees—a percentage of the points on the loan—directly from the bank. In certain cases—for example, when there are no points—the buyer pays the broker directly. But you should never do that before the loan closes. An NAMB spokesman advises: "If someone asks you up front for money and promises that you'll get a loan, walk right out." *Laurel Touby*

Health

CATARACT SURGERY IS GETTING EASIER ON THE EYES

s I write this on my home computer, it's noon, barely two rs since I lay on an operat- table at New York's unt Sinai Hospital. While I tted with him in a sodium- tathol haze for 45 minutes, Julius Shulman performed me surgical procedures own by such tongue-twist- terms as phacoemulsifica- n and intraocular implanta- n. That is, he removed a aract from my right eye d inserted a new lens.
As one of more than a mil- n people a year who have aract surgery, at ost that runs from 100 to several es that, I know n on my way to ing things more arly. After a few eks of healing, I'll fitted with glasses weaker than my ones. I'm certain vision will sharp- because my left e had similar sur- ry three years ago. d since then, says . Andrew Farber, Terre Haute (Ind.) hthalmologist, "the chnique has im- oved greatly." Sur- ons now make uch smaller inci-sions, speeding healing time significantly. More than 90% of patients get improved vision, without complications.

GHOSTS. Usually, advancing age causes cataracts—a clouding or change in the eye's lens. The cloudiness may increase over months or years, but few people wait until the lens is opaque to undergo surgery. If you sometimes seem to see through a film of smog, a cataract may be developing. Or if the lens thickens slightly, as mine did, objects can appear with a "ghost," as on a TV screen.

Unlike other operations, you tell the doctor when you need surgery. Shulman says the average patient tolerates impaired vision for two or three years before agreeing that glasses or contact lenses are no longer sufficient.

Contrary to popular belief, the operation isn't done with a laser. Peering through a microscopic device, the surgeon makes a ¼-inch incision in the cornea with a scalpel. Then an ultrasonic vibrating probe points into the opening to emulsify the cataract and suction it away. After a plastic lens—no larger in diameter than a pencil—is inserted, a hair-thin nylon stitch closes the incision.

Patients who wear glasses still need them afterward—especially for reading, since the implanted lens can't flex like a natural one for close-up work. And in 30% to 60% of all cases, says Farber, a clear membrane behind the lens may itself become cloudy in a few years. Then, a laser can come into play. The surgeon can use it to burn a tiny hole in the membrane, so light can get to the retina unimpaired. *Don Dunn*

ROXANNA VILLA

Software

THE BEST OF DESKTOP GOLF COURSES

My opponent and I are standing on the first tee at the Tournament Players Club at Sawgrass. The wind is in my face on this tricky, 380-yard hole, with water running along the right of the fairway. Selecting my driver, I rear back and nail one 303 yards down the middle. I am about to let out a yell when I realize I'd better be careful; someone in the next office might hear me.

Such are the dangers of computerized golf. Over the past few years, software makers have produced a number of brightly animated golf games for the personal computer. True, they're a long way from the real thing. But on a winter weekend—or, O. K., the occasional late Friday afternoon at work—they can be a fun diversion.

The two best are PGA Tour Golf (Electronic Arts, $50) and Links (Access Software, $60). While PGA Tour Golf comes in Macintosh and IBM versions, Links will run only on IBM and compatible machines. Links also requires a VGA monitor and a hard disk.

Both games have gaping water hazards, treacherous rough, and agonizing putts that roll off the lip of the cup. But unlike real golf, they're easy to learn. A golfer has no advantage over a nongolfer—with the exception of knowing the terminology.

With PGA Tour Golf, your backswing begins with a tap of the mouse (or the space bar on your keyboard). Another tap starts the downswing, and your final tap decides how straight your shot will go. Hit it too early and the ball goes left, too late and it goes right. Once you reach the green, you'll get a detailed topographic map showing the putting surface's undulations. Playing the Links game is much the same.

ROBO REPARTEE. The attention to detail in PGA Tour Golf is great. But the animated graphics of Links are mind-boggling, from the lifelike trees to the realistic contours of the fairways and greens. Birds twitter in the background, and Links even duplicates golfers' inane chatter. "Get there!" croaks the computer when you've hit the ball a little short of the hole.

Links' main drawback is its slowness in drawing each hole. Some take up to 30 seconds. Having a fast computer, such as one based on a 386 or 486 microchip with extended memory, cuts the time in half.

One last notable is Jack Nicklaus' Unlimited Golf & Course Design (Accolade, $60). The golf game itself is mediocre, but the course design part is fun. You can lay out your own course, from tee to rough to green, and then you get to play it. Quietly—but you know what's good for you. *Peter Finch*

Smart Money

STOCKS THAT START WHEN CHAPTER 11 ENDS

With so many companies going into bankruptcy, some investment pros see new opportunities in the stocks of ones that are exiting it. If the companies use Chapter 11 to shape up their operations and restructure debt, they can be poised to do well once they emerge.

Just the idea that it might happen can drive up the stock, says George Putnam, of *The Turnaround Letter*. "And if the company cleans up its balance sheet by issuing large amounts of new stock to creditors, you can have an effect like an initial public offering, with almost a buying frenzy." When Southland came out of bankruptcy last March, its $2-a-share price jumped about 25% in the first weeks, on volume of 700,000 to 850,000 shares. And Maxicare Health Plans showed healthy gains in strong trading after it exited Chapter 11 last April.

But there's also a risk that once-stung creditors may unload their new stock and topple prices. So, even if you like a company's outlook, you might want to wait until the post-bankruptcy frenzy ends to get a fix on how it's really doing. A different approach is to invest before the company completes its reorganization. To do it, you buy a bond or preferred stock that will be exchanged for new common shares under the reorganization plan.

OPEN STORES. Some investors did that with Maxicare (chart). Now there's a similar opportunity in the wake of last year's collapse of Federated Department Stores and Allied Stores. Bankruptcy meant default on $700 million worth of 11.5% Allied bonds due in 1997. The reorganization plan says bondholders will get 12 shares of stock in the merged company. An analysis of the plan by BDS Securities suggests buying the bonds at the current asking price, 13¢ on the dollar. So, a $130 investment secures 12 shares of new common, for a per-share price of $10.80. BDS expects the stock to trade at $14 to $15 in February when the company exits bankruptcy.

Among companies expected to emerge from Chapter 11, Putnam suggests looking at Revco, LTV, Tracor, and Lomas Financial. "But don't play the game unless you can diversify with five, six or seven bonds in your portfolio," advises BDS' Carl Vaicek. That offsets some risks inherent in a complex reorganization scheme. *D. D.*

HOW ONE PLAY IN BANKRUPTCY PAID OFF

Early this year, you could have bought a Maxicare 11.75% bond for $90. When the company emerged from Chapter 11 in April, the bond was convertible into 15 shares of common stock. The stock opened at $8 and rose as high as $10 before dropping back below $8—still a gain over your cost of $6 a share

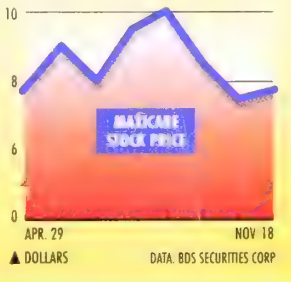

CHART BY RAY VELLA/BW

ndex to Companies

is index gives the starting page for a story or fea-
e with a significant reference to a company. Most
ɔsidiaries are indexed under their own names.
ɯpanies listed only in tables are not included.

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In Taipei,
I Always
Stay at
Brother Hotel Where
I Have Many Friends

For years business has brought me time and again to Taipei. My first choice of hotel there has always been Brother Hotel, and with good reasons No other location gives me that unique feeling of being treated like a brother And its personal, attention-to-detail service has never failed to bathe me in warmth and coziness
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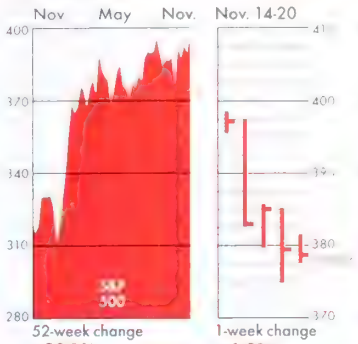
nvestment Figures of the Week

MENTARY

od-curdling week in the fi-
al markets. The Dow Jones in-
al average plummeted 120
s on Nov. 15, a 3.9% drop,
ders fretted over the econo-
continued weakness. Fears
t a cap on credit-card rates,
would hurt bank earnings,
ibuted to the decline. So did
rp decline in biotechnology
s, which pummeled the over-
unter market. Stocks re-
ded on Nov. 18 but gave up
gains the following day.
seas markets joined in the
ff

STOCKS

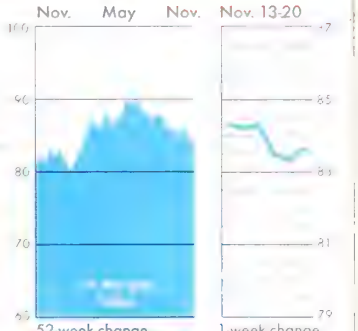


52-week change +20.1%
1-week change −4.8%

BONDS

52-week change +5.7%
1-week change −0.2%

THE DOLLAR



52-week change +3.6%
1-week change −0.8%

ARKET ANALYSIS

STOCKS	Latest	% change Week	% change 52-week
JONES INDUSTRIALS	2930.0	−4.4	15.8
OMPANIES (Russell 1000)	199.9	−4.7	22.5
L COMPANIES (Russell 2000)	178.2	−5.3	43.5
OMPANIES (Russell 3000)	212.8	−4.7	23.6

EIGN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
ON (FINANCIAL TIMES 100)	2472.6	−2.9	16.9
O (NIKKEI INDEX)	23,199.9	−5.0	0.0
NTO (TSE COMPOSITE)	3501.7	−2.6	12.7

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.61%	4.77%	7.4%
30-YEAR TREASURY BOND YIELD	7.90%	7.87%	8.5%
S&P 500 DIVIDEND YIELD	3.24%	3.10%	3.7%
S&P 500 PRICE/EARNINGS RATIO	21.0	22.0	14.5

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.9	384.5	Negative
Stocks above 26-week moving average	45.0%	56.0%	Neutral
Speculative sentiment: Put/call ratio	52.3	0.37	Positive
Insider sentiment: Vickers sell/buy ratio	1.92	2.51	Positive

DUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

R-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
MMUNICATIONS EQUIPMENT	8.5	70.0	ANDREW	20.0	71.4	33
YS	7.5	100.2	HASBRO	13.3	130.5	34
ECIALTY APPAREL RETAILERS	6.2	111.0	GAP	8.7	231.5	51 [illegible]
FT DRINKS	4.9	32.7	COCA-COLA	5.1	45.1	66 3/8
OKERAGE FIRMS	4.5	132.9	BEAR STEARNS	6.7	94.5	15 1/2
R-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
RSONAL LOANS	−18.0	56.8	HOUSEHOLD INTERNATIONAL	−24.9	75.1	44
ACHINE TOOLS	−16.3	−3.5	CINCINNATI MILACRON	−20.5	−15.1	7 [illegible]
GINEERING AND CONSTRUCTION	−14.9	1.6	FLUOR	−18.2	−4.2	36 [illegible]
OSPITAL MANAGEMENT	−13.4	−23.1	NATIONAL MEDICAL ENTERPRISES	−14.9	−17.0	15
TOMOBILES	−13.1	−13.7	GENERAL MOTORS	−15.1	−17.6	31 [illegible]

UTUAL FUNDS

MORNINGSTAR INC

DERS

week total return	%
AKMARK	8.3
ORGAN STANLEY ASIAN EQUITY	7.3
EWPORT TIGER	7.1

eek total return	%
PPENHEIMER GLOBAL BIO-TECH	122.6
BERWEIS EMERGING GROWTH	92.9
NANCIAL STRATEGIC HEALTH SCIENCES	92.9

LAGGARDS

Four-week total return	%
CRABBE HUSON GROWTH	−10.8
FIDELITY SELECT COMPUTERS	−8.7
AMERICAN INVESTORS GROWTH	−8.5

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−13.6
USF&G EUROPEAN EMERGING COMPANIES	−13.5
STRATEGIC INVESTMENTS	−13.3

ELATIVE PORTFOLIOS

DATA RESOURCES INC

ar amounts
esent the present
e of $10,000
sted one year ago
ach portfolio

entages indicate
day total returns

U. S. stocks	Foreign stocks	Treasury bonds	Money market fund	Gold
$12,281	$11,701	$11,619	$10,543	$9,584
4.37%	−2.94%	−1.10%	+0.09%	+1.39%

to on this page are as of market close Wednesday, Nov. 20, 1991, unless otherwise indicated. Nov. 19. Mutual fund returns are as of Nov. 15. Relative portfolios are valued as of Nov. 19. A more
ry groups include S&P 500 companies only, performance and share prices are as of market close. detailed explanation of this page is available on request

CUT INTEREST RATES, NOT TAXES

The President's instincts to stonewall rising pressure from Congress for a quick-fix tax cut are 100% correct. True, tax cuts have been used effectively to kick-start the economy out of recession—but this is no ordinary downturn. Cuts would do more harm than good, raising hob with the deficit, exacerbating our trade balance because of consumers' propensity to buy imports, and occurring too late to do much stimulating before mid-1992 at the earliest.

This is a recession unlike any other, because the economy is held back by a larger set of long-term structural problems (page 28). It will take years to address the recalcitrant budget deficit, chronically poor productivity growth, a crumbling infrastructure, the job squeeze from restructuring in industries from banking to retailing, the low savings rate and record burden of debt, and the glut of commercial real estate. These long-run problems require long-run solutions.

That's why the off-the-shelf remedy for cyclical recessions, tax cuts for the consumer, won't work. It makes much more sense to rely on a low-inflation, low-interest-rate environment to stimulate long-term investment throughout the economy. The Federal Reserve still holds the key.

The central bank must continue to lower interest rates until spending starts up again. This is no time for business as usual at the Fed. Because of the large spread between what banks pay for money and what they lend it for, the Fed need not fear pushing the discount rate and the Fed funds rate even lower. It's important to get the rates at which real businesses and home buyers borrow money down even further. There are other steps the Fed can take to make banks lend more. It could pay interest on reserves, the billions of dollars banks must keep on deposit with the Fed. Also, it could act to push down long rates, which would stimulate housing and other long-term investments.

A sweeping program of public investment to rebuild the nation's tattered infrastructure is a fiscal policy option. Public investment yields benefits for the long term as well as the short. And one advantage of public investment is that it enhances productivity, one of the economy's gravest long-term problems.

PROGRESS ON PATENTS IS PENDING

The future of many businesses, and perhaps even the competitiveness of U. S. industry, hinges on the amount and quality of patent protection companies can get. And patent questions are getting more complicated every day as companies, universities, and individual scientists attempt to gain protection for everything from individual genes to fundamental manufacturing processes.

The U. S. patent system is full of anachronisms and quirks that can hamper progress—and sometimes give foreign industry advantages (page 110). The Patent & Trademark Office still clings to a policy of granting patents to those inventors who can prove they first cried "eureka!" Much of the rest of the world simply awards a patent to the first to apply, thus curbing costly litigation.

Everyone would benefit if ongoing negotiations aimed at harmonizing the world's patent systems were to bear fruit. There is hope for progress. After decades of intransigence, U. S. companies and the patent office appear to be willing to give up such American idiosyncrasies as "first to invent" in exchange for patent reforms in Japan and Europe. The Commerce Dept., which is responsible for the patent office, needs to use this newfound flexibility to insist on concessions from other nations, such as speeding up Japan's excruciatingly long patent examining time. The patent office also needs to rev up its automation efforts—it still stores its patents in wooden boxes, for example. And the Bush Administration needs to make sure that the U. S. has enough qualified examiners to make the right decisions on increasingly difficult and high-stakes patent questions. Unless the U. S. moves to restore the patent system's health, there is a risk of snuffing out that crucial fire of innovation.

THE SHAPE OF PARTNERSHIPS TO COME

When Taiwan Aerospace opened talks aimed at buying 40% of the commercial airframe business of McDonnell Douglas for as much as $2 billion, a lot of observers shrugged off the deal as an inconsequential offer for a failing business (page 55). But the bid should be seen as an augury: More and more U. S. companies without the resources to compete globally on their own will have to seek out partners abroad.

This is nothing new, of course. Detroit's carmakers have done it for years, but they often managed the joint projects as extensions of their U. S. businesses and product lines. In the McDonnell Douglas deal, the U. S. company is ceding a lot of control and equity to the overseas partner. Something different is being created—a hybrid adapted to irresistible new market forces, in this case rapid growth in Asia.

International management consultant Jordan Lewis argues that what he calls "partnering" is required to compete effectively in Asia, Europe, and North America. In this view, McDonnell Douglas is partnering with the deep-pocketed Taiwanese government that can provide entrée into the rich Southeast Asian market for long-distance jetliners and at the same time muster considerable engineering and assembly knowhow. If it follows Lewis' logic, McDonnell Douglas will someday also find a partner in Europe.

There is a new challenge to U. S. management in all this. American companies should vigilantly protect their top technologies and manufacturing techniques built up over decades and plow profits from the partnerships into these areas of strength. That will prevent the hollowing out of the U. S. partners. At the same time, U. S. executives must be flexible enough to learn from their partners how to manage and market in the new environment.

December 9

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BusinessWeek

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THE BAD BOY OF SILICON VALLEY

THE OFFBEAT MANAGEMENT IDEAS OF CYPRESS SEMICONDUCTOR'S T. J. RODGERS PAGE 64

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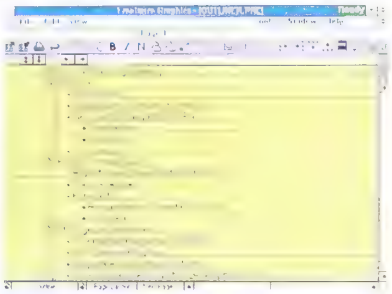

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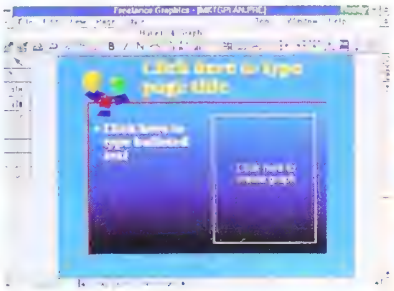

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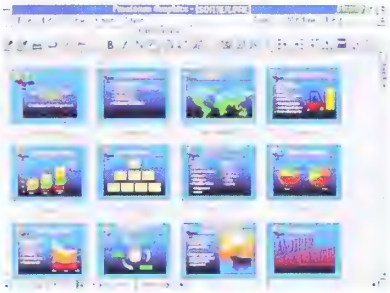

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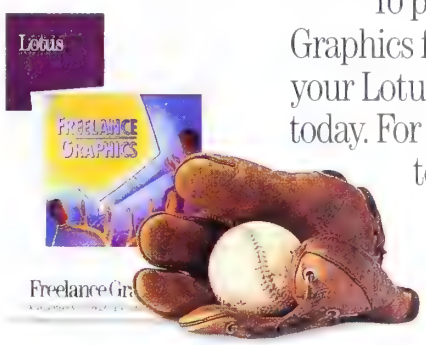

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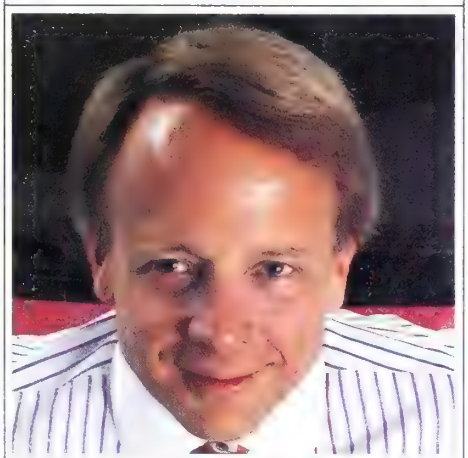

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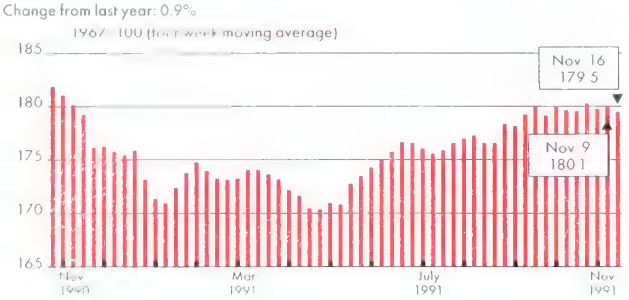
BusinessWeek Index

PRODUCTION

Change from last week: −0.3%
Change from last year: 0.9%

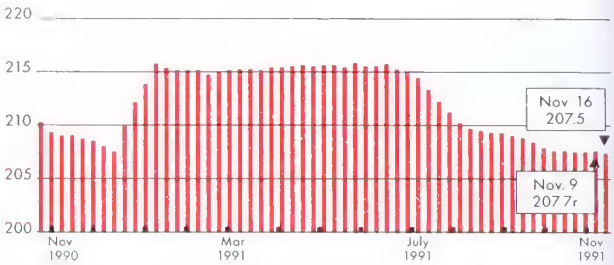


The production index fell slightly during the week ended Nov 16. Seasonally adjusted output of autos, trucks, electric power, and paperboard declined. Production of steel, crude-oil refining, coal, paper, lumber, and rail-freight traffic increased Before calculation of the four-week moving average, the index dropped to 178 4, from 181. However, the index' volatility this week and in coming weeks reflects the later-than-normal Thanksgiving holiday, which is skewing some seasonal factors

BW production index copyright 1991 by McGraw Hill Inc

LEADING

Change from last week: −0.1%
Change from last year: −0.8%



The leading index fell slightly during the week ended Nov. 16, as the index continues to weaken. In the latest week, stock prices were higher, bond yields lower, and the growth rates for both materials prices and for real estate loans improved. The number of business failures decreased sharply, while the growth in M2 was down a bit. As a result, before calculation of the four-week moving average, the index increased to 207.8, from 206.7

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/23) thous. of net tons	1,760	1,814#	−7.6
AUTOS (11/23) units	109,505	132,984r#	43.1
TRUCKS (11/23) units	77,103	72,872r#	64.5
ELECTRIC POWER (11/23) millions of kilowatt-hours	52,991	54,268#	6.3
CRUDE-OIL REFINING (11/23) thous. of bbl./day	13,239	12,761#	3 6
COAL (11/16) thous. of net tons	19,949#	19,471	−6.2
PAPERBOARD (11/16) thous. of tons	766.9#	781.0r	3.8
PAPER (11/16) thous. of tons	776.0#	758.0r	0.6
LUMBER (11/16) millions of ft	519.3#	493.9	13.6
RAIL FREIGHT (11/16) billions of ton-miles	21 0#	20.4	−0.5

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (11/26)	128	130	133
GERMAN MARK (11/26)	1.58	1 60	1.51
BRITISH POUND (11/26)	1 80	1.79	1.93
FRENCH FRANC (11/26)	5.40	5.47	5 09
CANADIAN DOLLAR (11/26)	1 13	1.14	1 17
SWISS FRANC (11/26)	1 40	1.42	1.28
MEXICAN PESO (11/26)	3,050	3,048	2,932

Sources: Major New York banks Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (11/26) $/troy oz.	366.250	362.600	−4.9
STEEL SCRAP (11/25) #1 heavy, $/ton	94.00	94 00	−11.7
FOODSTUFFS (11/25) index, 1967=100	203 6	206 1	−3.3
COPPER (11/23) ¢/lb.	109 0	110 6	−11.0
ALUMINUM (11/23) ¢/lb	52 6	52.8	−26.9
WHEAT (11/23) #2 hard, $/bu.	3.77	3.69	37.1
COTTON (11/23) strict low middling 1-1/16 in., ¢/lb	53.75	54 26	−20.3

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (11/22) S&P 500	379.92	393.41	20.1
CORPORATE BOND YIELD, Aaa (11/22)	8.46%	8.43%	−8.5
INDUSTRIAL MATERIALS PRICES (11/22)	95.7	95.4	−6.4
BUSINESS FAILURES (11/15)	341	434	11.4
REAL ESTATE LOANS (11/13) billions	$396.8	$396.5r	2.3
MONEY SUPPLY, M2 (11/11) billions	$3,397.6	$3,397.0r	2.3
INITIAL CLAIMS, UNEMPLOYMENT (11/9) thous	493	454	1.0

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
HOUSING STARTS (Oct.) annual rate, thous.	1,096	1,021r	6.8
BUDGET SURPLUS OR DEFICIT (-) (Oct.) millions	−$35,977	−$6,829	−15.0
IMPORTS (Sept.) millions	$42,218	$40,910	2.2
EXPORTS (Sept.) millions	$35,428	$34,380	9 9

Sources: Commerce Dept., Treasury Dept.

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (11/11)	$884.9	$883.8r	7.9
BANKS' BUSINESS LOANS (11/13)	295.6	296.3r	−9.1
FREE RESERVES (11/13)	802r	962r	10.6
NONFINANCIAL COMMERCIAL PAPER (11/13)	135.1	135.6	−11.4

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for a two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (11/25)	4.89%	4.78%	7.56%
PRIME (11/26)	7.50	7.50	10.00
COMMERCIAL PAPER 3-MONTH (11/25)	4.94	4.97	8 06
CERTIFICATES OF DEPOSIT 3-MONTH (11/26)	4 87	4.92	8.23
EURODOLLAR 3-MONTH (11/23)	4 90	4.98	8.03

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment.
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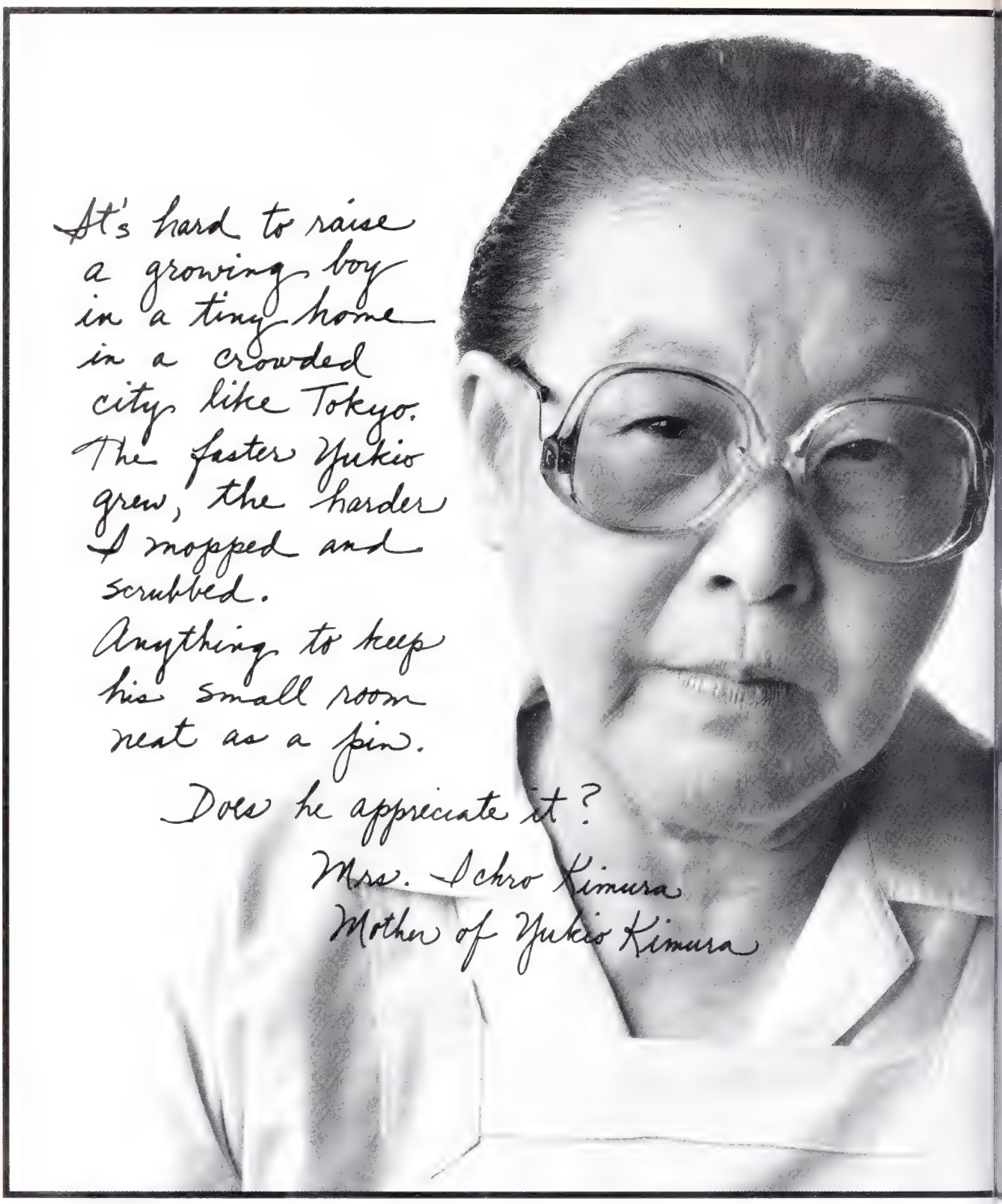

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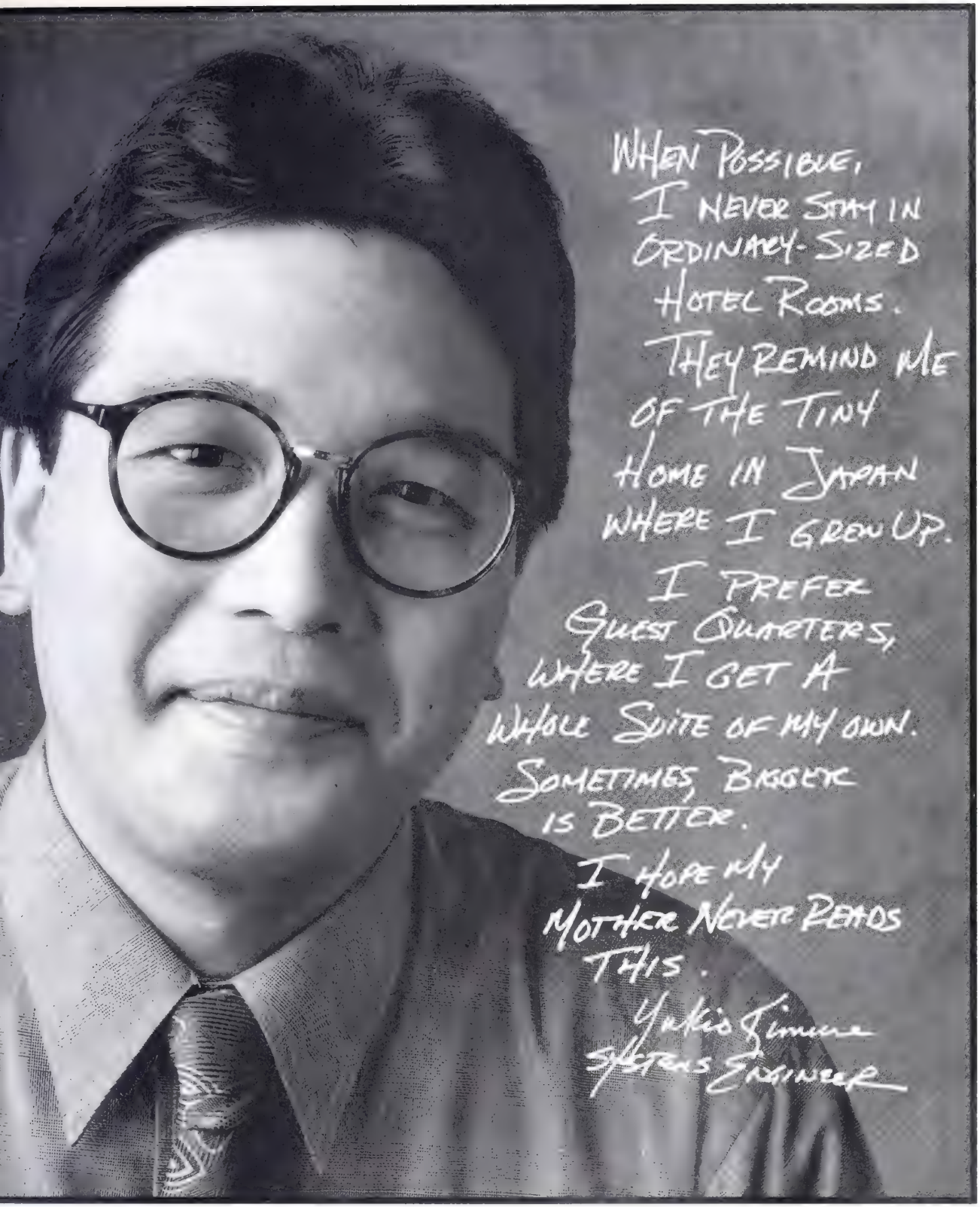

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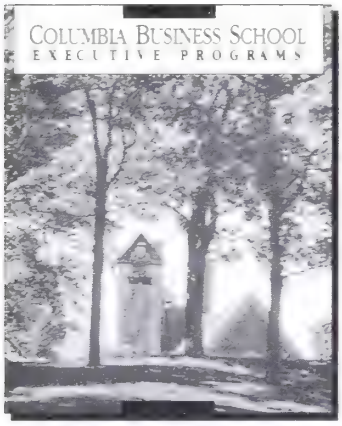

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Readers Report

THE QUALITY ISSUE: A QUALITY JOB

Congratulations on "The Quality Imperative" (Special Issue, Oct. 25). It deserves recognition as a distinguished public service and establishes a new benchmark for journalistic presentation of this subject.

My "dueling" with W. Edwards Deming consists mainly of editorial effervescence. We have followed different career paths, but they have intersected in the field of managing for quality.

Our area of agreement is much greater than our area of difference. These differences have not disturbed a friendship and mutual respect dating back to World War II.

J. M. Juran
Chairman Emeritus
Juran Institute Inc.
Wilton, Conn.

BUSINESS WEEK has hit the jackpot! Quality, in its modern conception of an all-encompassing attribute, is obviously the most important subject related to business activity and competitiveness.

Robert H. van Ligten
Waterford, Mich.

Regarding your assertions about "archrivals" W. Edwards Deming and J. M. Juran, Deming's approach (statistical process control) must be used to solve a variety of complex (and not-so-complex) problems.

Juran's approaches to team-based process improvement and quality planning rely on four pillars, namely: project management, a structured approach to problem-solving, use of simple process-improvement tools (process-mapping, etc.), and an infrastructure designed to support and manage project-by-project improvement. These are not opposing approaches. True, Juran's approach is easier to understand. But—and this is a big but—without the methodology Deming prescribes, many manufacturing problems cannot be corrected or solved.

The Deming approach, coupled with project-by-project quality improvement (an element of the Juran approach), is the only way to solve the bulk of chronic quality problems.

Edward E. Emanuel
Chairman
QualityAlert Group
New York

When I read the names of R. A. Fisher and Walter Shewhart, I realized how well you had done your homework. These people are almost unknown to the present generation, but their books helped lead me through the hurdles of statistical analysis almost 50 years ago.

I was employed in the forest-products industry, and in 1950 I began trying to sell these ideas, particularly those of Shewhart and one of his disciples, Eugene Grant.

At first, I was thinking only of quality control, but later I realized that these ideas could be applied just as well to other areas of management, including control of costs and production rates.

From 1950 until my retirement in 1980, I tried without success to get a hearing. It is sad that such vital concepts have not found better acceptance in the U. S. Maybe your excellent articles will help. I hope so.

Byrne C. Manson
Bellevue, Wash.

This is a high-quality issue—as usual from BUSINESS WEEK. Manufacturing is doing an excellent job to improve quality, enabling it to approach the standards set by Japan.

American agricultural efficiency is the envy of the world. You only touched on the public sector—but it is terribly inefficient.

We lead the industrial world in the worst statistics: homelessness, prison population, violence, per capita cost of health care and education, energy usage per GNP, etc.

Fifty percent of the voting population

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esn't go to the polls, because there is tle quality in the cumbersome governent sector. Government is like an inrable disease: It only gets worse with e.

Robert L. Tracy
Lancaster, Mass.

t is interesting to compare "The Quality Imperative" with your recent "Val- marketing" message (Cover Story, ov. 11).

The quality techniques you described well help businesses add real value r their customers. But promoting bet- r value and adding guarantees, 800 mbers, etc.—in order to influence perived value artificially—only increases sts.

Which way do you think makes manucturers more competitive?

Ed Heard
Nashville

sn't one of Deming's precepts that quality programs must be initiated by licymakers at the top before real imovements can be made by the people erating below?

If so, how are any quality-oriented sinesses going to flourish in a nation anaged by a government preoccupied th its own provincial politics?

James Van Der Pool Grace
New York

HAT KEPT EASTERN I THE AIR

make no apologies for exhausting every possible alternative to keep Eastn Air Lines flying ("Eastern: The ngs of greed," Top of the News, Nov.). Independent industry observers ch as *Frequent Flyer* magazine rted in late 1990 that Eastern was proding the best service of any airline in e country.

Its 20,000 employees were the most dicated that I have ever seen in my 23 ars of experience in the airline indusy. Our consumers and travel agents ere enthusiastically endorsing our new oduct, as indicated by the upward end lines that we were experiencing in ctober.

I will admit that I did not foresee the ar in the gulf and its devastating imct on airline traffic.

If anyone believes that the effort to ep Eastern alive was not worthwhile d in the public interest, I suggest that or she talk to travelers in Atlanta, iami, and other Eastern cities and ask em to compare the prices they are payg now for air travel with prices when astern was a vigorous competitor in ose markets.

Ultimately, forces beyond our control forced a shutdown of the carrier. In light of current economic conditions, Eastern's liquidation has been extraordinarily successful.

The only reason the creditors continue to have any prospect of a recovery is because of the fine work of Eastern's staff and the dedicated employees who continue to work long hours to put the best face on this sad chapter of aviation history.

It is most distressing to see a magazine of the caliber of BUSINESS WEEK give voice to third-string "Monday morning quarterbacks" who now attempt with hindsight to reinterpret history.

Martin R. Shugrue
Trustee
Eastern Air Lines Inc.
Miami

While the results of Eastern Air Lines' failed efforts to reorganize are indisputably unfortunate in many respects, it is irresponsible to suggest that Eastern's bankruptcy stands as an indictment of the reorganization process. Creditors had a substantial role in the decision-making process, were kept fully and currently apprised of all the facts, were instrumental in decisions to change management and continue the business, and endorsed all but $135 million of the expenditures.

Any accurate commentary on the Eastern bankruptcy cannot ignore the hostile and senseless efforts of the unions to destroy the business, the extraordinary efforts by thousands of dedicated employees who braved the unions' invective to rebuild the airline, and the severe dislocations suffered by the entire industry as a result of deregulation, the severe economic recession, and the Persian Gulf War.

Bruce R. Zirinsky
Weil, Gotshal & Manges
New York

Editor's note: Zirinsky's firm represents Eastern.

WHY SUBSIDIZE THE FOREIGN STUDENT?

It is well known that tuition, even the out-of-state charges paid by foreign students at public universities, doesn't begin to pay the actual costs of education ("Foreign students keep coming—and keep spending," Economic Trends, Nov. 4).

At a conservative cost estimate of more than $10,000 a year, any spending windfall is almost totally offset.

My answer? Make foreign students pay cost and don't admit them at all to colleges where American students are suffering from budget cuts, overcrowded classrooms, limited resources, or eradication of programs. Exchange programs are one thing, but how many U. S. students are studying in China?

John A. Hennessy
Portland, Ore.

INVESTORS WHO'LL TAKE THE LONG-TERM VIEW

"How America can get the 'patient' capital it needs" (The Corporation, Oct. 21) is a superb commentary on what is perhaps the most critical issue facing corporate managers, boards of directors, and institutional investors today.

Much of the acquisition and leveraged buyout activity of the 1980s was affected by governance-related matters. Today, the subject's importance and relevance continues unabated.

Until the U. S. business community learns to strike the correct balance between short-term quarterly performance and long-term growth and stability, our corporations' global competitiveness and investment returns will suffer.

Lester Pollack
New York

THE IMPORTANCE OF CORPORATE INTELLIGENCE

Regarding your story "Should the CIA start spying for corporate America?" (Government, Oct. 14), I have met with, consulted for, and taught thousands of competitive analysts working for U. S. corporations.

They are a hard-working, honest lot. Calling them "briefcase snoops" is like calling a reporter a "rumormonger." Their work is based on analysis derived from searching data bases, government documents, and hard-won interviews honestly conducted.

In the past decade, U. S. companies have finally realized they must attentively watch their global competition, with honesty and passion.

They recognize the job of corporate intelligence is as important as sales or R&D. The addition and development of intelligence programs in the corporate organizational structure is testimony to that fact.

Leonard M. Fuld
President
Fuld & Co.
Cambridge, Mass.

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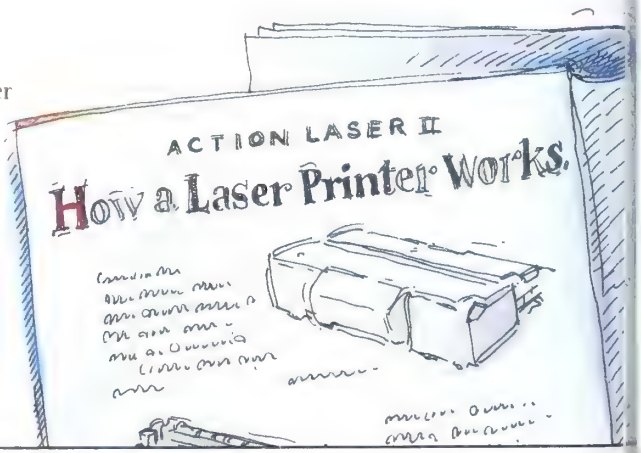

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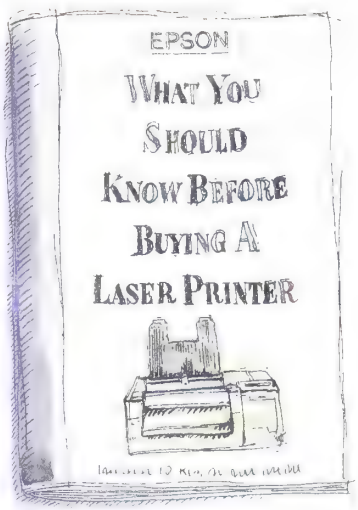

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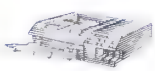

Lasers

Servers

THE BEST BUSINESS BOOKS OF 1991

It was—shall I say it?—not the greatest year for business books. Not that there weren't plenty of them. The recent success of such titles as *Barbarians at the Gate* and *Liar's Poker* sustained publishers' enthusiasm for business topics. The good news for readers is that the trend to accessible, anecdotal business books remained strong. But many books were disappointing—even some of the year's best seemed in need of a strong editor. With increasing frequency, BUSINESS WEEK's reviewers complained of unnecessary detail and repetitiveness. Even in this frustrating year, however, 10 books stand out.

The Prize: The Epic Quest for Oil, Money and Power, by energy consultant Daniel Yergin (Simon & Schuster), is perhaps the best history of oil ever written. Over the course of 877 pages, Yergin ponders the idea of oil as power—not just physical power, but also economic and hence political power. The book's best section is a gripping account of World War II as a struggle fought for, and with, oil. The analysis of the oil shocks of the 1970s and the glut of the 1980s is also well done. While *The Prize* tells more about its subject than you may ever want to know, it brings our knowledge of the 20th century—the Age of Oil—into sharper focus.

Like *The Prize*, Ken Auletta's *Three Blind Mice: How the TV Networks Lost Their Way* (Random House) tells its story in detail so plentiful it can be overwhelming. Starting in 1984, the book relates the takeovers of CBS, NBC, and ABC, which took place even as the three were being challenged by cable, VCRs, and the upstart Fox Broadcasting Co. It's a tour de force of reporting: Virtually everyone who mattered talked to Auletta, and he sat in on sales meetings, gatherings of network affiliates, and sessions in which Hollywood producers pitched series.

In particular, the chapter in which Laurence A. Tisch closes his grip on CBS is dynamite. The heart of the book, though, is what happened after the nets changed hands. To varying degrees, Auletta frames these takeovers as a struggle between the old guard, resistant to change and blind to the changes around them, and the new guard, bean-counters ignorant of the TV business and especially the news business.

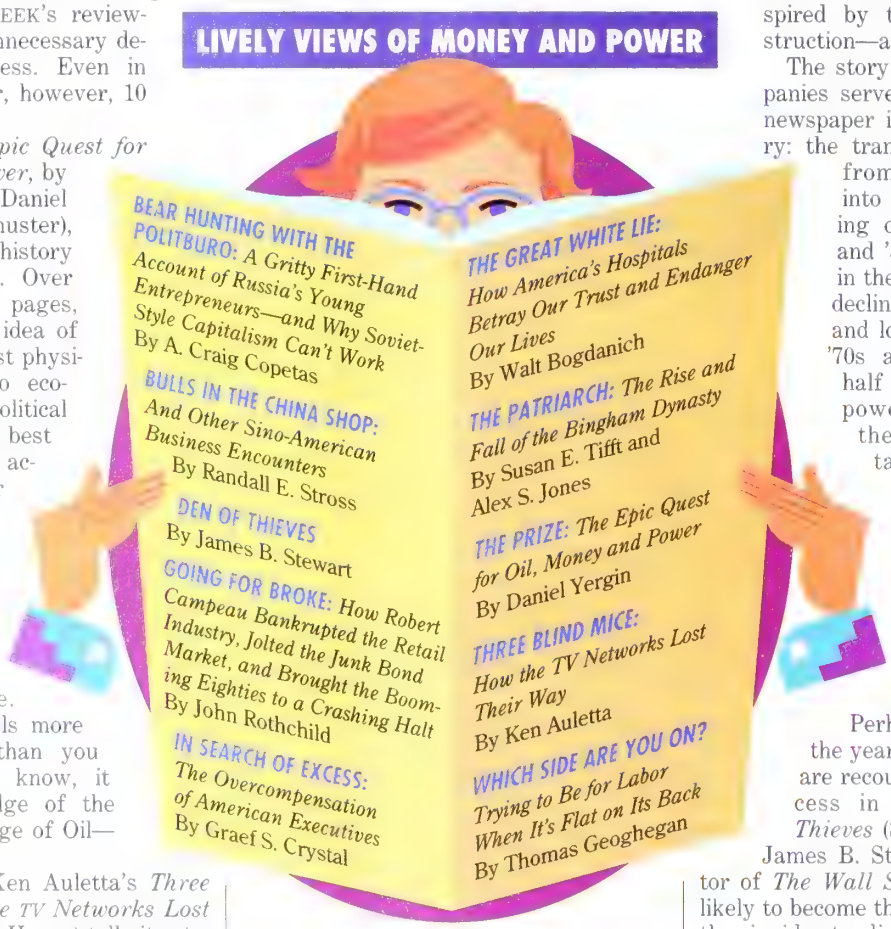
Just out and still to be reviewed in these pages, *The Great White Lie: How America's Hospitals Betray Our Trust and Endanger Our Lives*, by Walt Bogdanich (Simon & Schuster), is a terrifying indictment of the profit motive run amok in the health care system. The book smashes the comforting icons of Marcus Welby and Doogie Howser, replacing them with a vision of hospitals run by ex-cons, untrained nurses in intensive-care units, and widespread medicare fraud by hospital administrators.

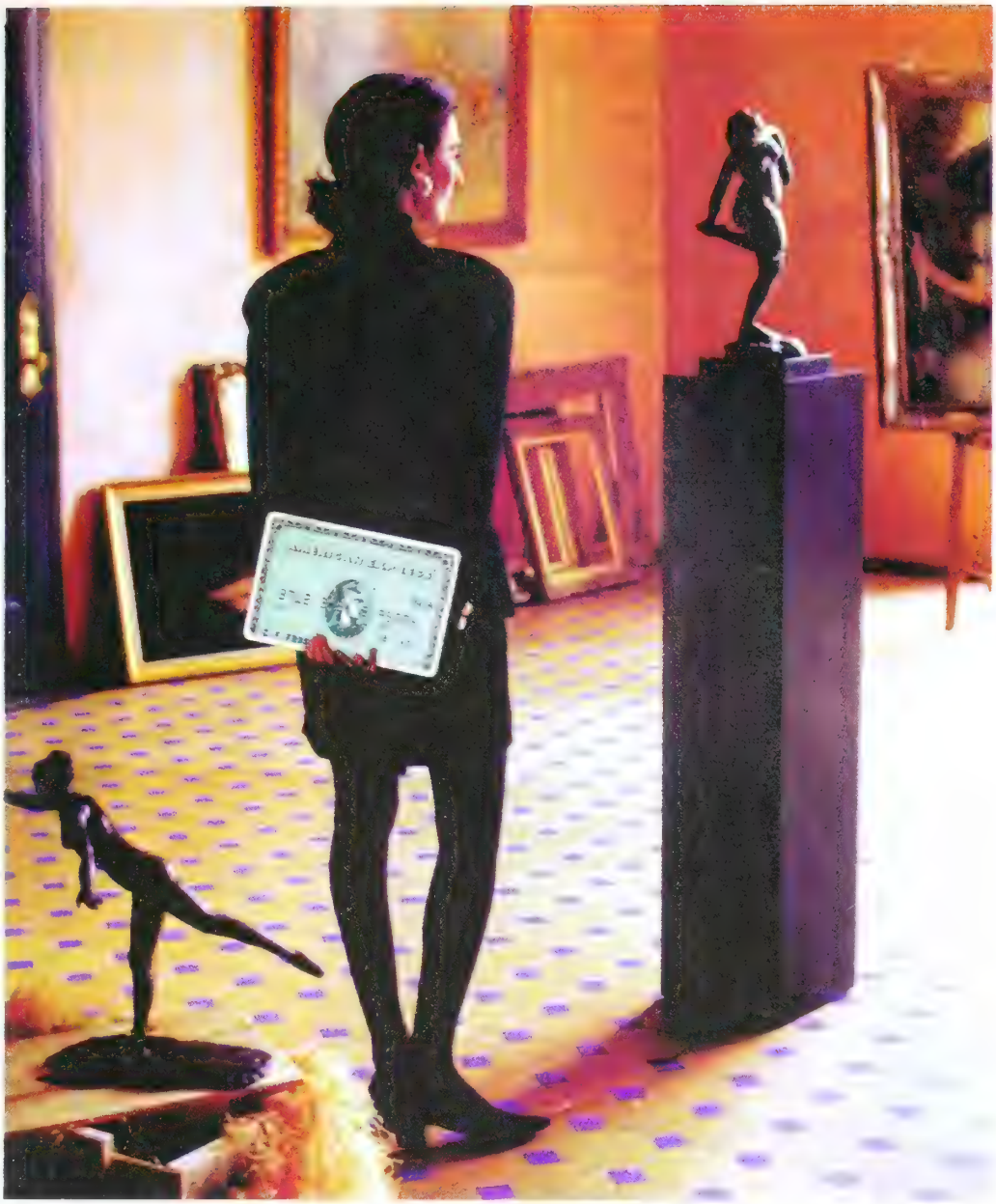
Bogdanich, a writer for *The Wall Street Journal*, marshals examples of malfeasance so extreme that at first they're hard to believe, but he balances them with analysis drawn from more than 15 years of reporting on the industry. His book helps explain why the U. S. health care bill is expected to balloon to some $1 trillion—nearly 15% of gross national product—by the year 2000.

The Patriarch: The Rise and Fall of the Bingham Dynasty, by Susan E. Tifft and Alex S. Jones (Summit), is the saga of the Binghams of Kentucky, who for decades ran a regional media empire headed by *The Courier-Journal* and *The Louisville Times*. In 1986, they sold out to Gannett Co., ostensibly because of squabbles among clan members and shareholders. This is the fourth book inspired by the dynasty's self-destruction—and by far the best.

The story of the Bingham companies serves as a history of the newspaper industry in this century: the transformation of papers from opinionated sheets into more objective reporting operations in the '20s and '30s, expansion into TV in the '40s and '50s, and the decline wrought by inflation and lost ad revenues in the '70s and '80s. The second half of the book, about the power struggles among the Bingham children, takes on a thriller's pace, climaxing with the decision to sell. This is a compelling account of what happens to a family company when family members don't trust each other.

Perhaps inevitably, two of the year's best business books are recountings of financial excess in the 1980s. *Den of Thieves* (Simon & Schuster) by James B. Stewart, front-page editor of *The Wall Street Journal*, seems likely to become the definitive account of the insider-trading scheme involving Dennis B. Levine, Ivan F. Boesky, and Michael R. Milken. It's not without flaws: Stewart, who apparently didn't interview Levine, Boesky, or Milken, treats those he did talk to—particularly the prosecutors—too sympathetically, and he tends to bury information at odds with his argument that Milken was the pivotal figure in "the greatest criminal conspiracy the financial world has ever known." Still, *Thieves* offers a wealth of





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—Karl Treutler, Munich

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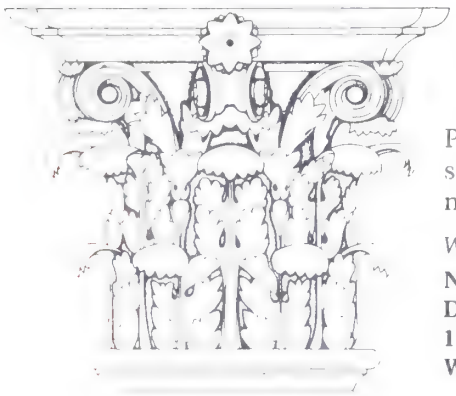

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fascinating minutiae, especially about the government's pressuring witnesses to give evidence against Milken. And it's packed with scenes of high drama.

Another fast-paced tale from the Decade of Greed is John Rothchild's *Going for Broke: How Robert Campeau Bankrupted the Retail Industry, Jolted the Junk Bond Market, and Brought the Booming Eighties to a Crashing Halt* (Simon & Schuster). It's an often comical account of how Campeau came more or less out of nowhere, took over two of the biggest department store chains in the U.S.—Allied Stores and Federated Department Stores—and drove them quickly into bankruptcy.

The story is almost incredible. Campeau, a self-made millionaire in Canadian real estate, had no retailing background and virtually no cash to put down. He seemed, moreover, vain, contradictory, and unpredictable—inclined to disappear at key moments. Still, investment bankers and lawyers fell over themselves to finance him and collect huge fees. They even let him borrow most of the $300 million in equity he had to put up for Allied. But for its devastating impact on the financial markets and the retailing industry, this would be a funny story.

In a year of disappointing business books, even some of the best seem in need of a strong editor

Excess is the theme, too, of Graef S. Crystal's *In Search of Excess: The Overcompensation of American Executives* (Norton), a hard-hitting analysis of what's wrong with executive pay in America. For nearly 20 years, Crystal was a top compensation consultant, striding into boardrooms to justify big raises for chief executives. Then he became the leading critic of excessive pay.

In *Excess*, he takes on all the big corporate money-makers. Drawing readers through the exotica of a proxy statement like an ebullient safari guide, he reveals the tricks used to obscure how much chief executives stand to make. He concludes by suggesting reforms to make the game fair to all—shareholders, employees, and executives.

Thomas Geoghegan's *Which Side Are You On? Trying to Be for Labor When It's Flat on Its Back* (Farrar, Straus & Giroux) is a witty, often scathing meditation on the state of the U.S. labor movement. A lawyer who has worked with unions for 20 years—usually with dissi-

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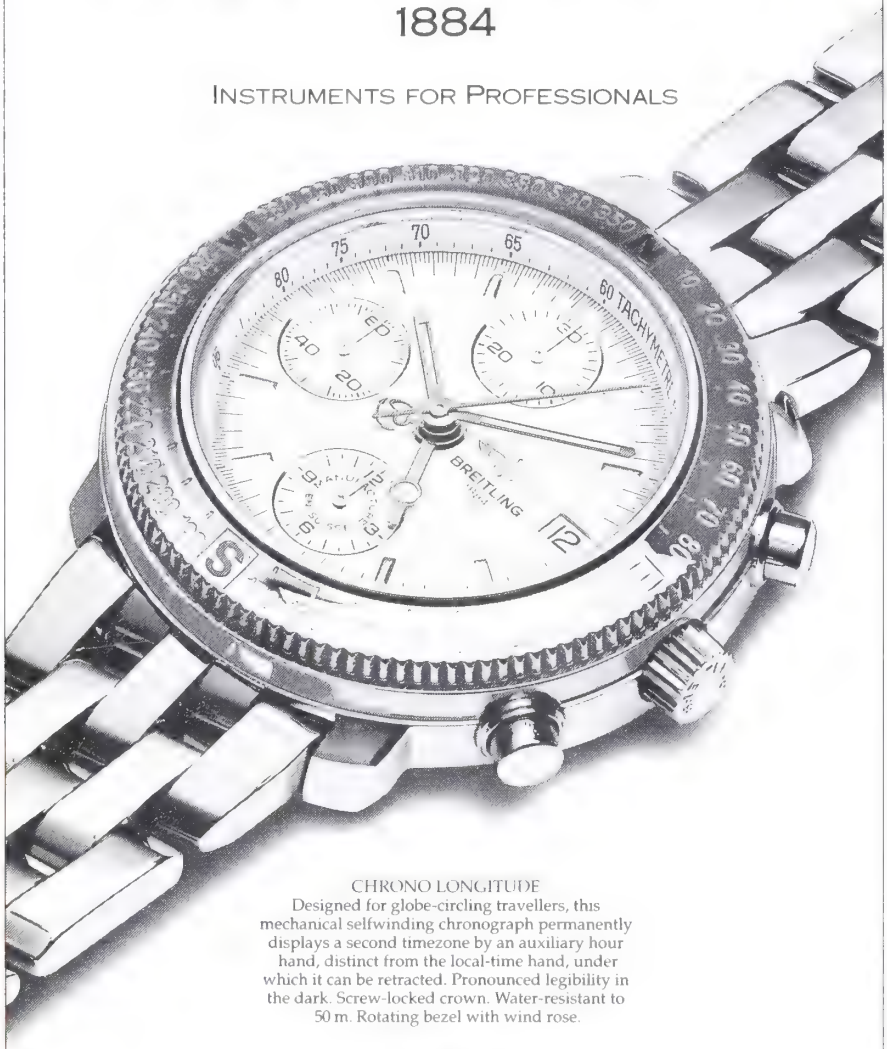

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Books

dents or reform groups—Geoghegan has written a quirky, highly personal book. He skewers everyone, lambasting Reaganomics and corporate executives for the layoffs and concessions that weakened unionism in the 1980s even as he condemns autocratic labor bosses. Geoghegan sometimes lapses into gloomy sarcasm, but as he describes clients who lost pensions to unscrupulous companies or lost limbs in unsafe factories, his compassion wins you over.

For American executives approaching two massive, changing markets—the Soviet Union and China—the year's best books include two cautionary tales. In his amusing *Bear Hunting with the Politburo: A Gritty First-Hand Account of Russia's Young Entrepreneurs—and Why Soviet-Style Capitalism Can't Work* (Simon & Schuster), A. Craig Copetas writes that *perestroika* has made trade more, not less, risky. That's because the mossbacks of the old trade bureaucracy, though corrupt, operated by an unspoken set of rules. The new traders, just as corrupt, play by no rules at all.

Copetas, who worked in Moscow from 1987 to 1991 as a correspondent for *Regardie's*, focuses on Volodya Yakovlev, a Soviet entrepreneur with a knack for suckering Westerners. During *perestroika's* glittering early years, a parade of Americans fawned over Yakovlev. Nearly all got burned, most notably by Yakovlev's refusal to recognize that a contract is a contract. Copetas' relationship with his subject is troubling—he worked as an adviser for Yakovlev—but his bitter portrait of the new Soviet free-marketers contains valuable lessons.

In the same vein, Randall E. Stross's *Bulls in the China Shop: And Other Sino-American Business Encounters* (Pantheon) is an entertaining account of American business misadventures in China. Stross, a professor of international business at San Jose State University, describes the difficulties caused by cultural and political differences. As in Copetas' book, confusion over the significance of contracts is a key problem. And again we see U. S. executives so enthralled with a novel land that they suspend their critical faculties.

A tragic quality underlies the comic moments in *Bulls*. Despite misunderstandings, Stross notes, U. S. executives in China have had a profound political impact. And since 1989's Tiananmen Square massacre, the Chinese "most influenced by American people and ideas" have paid dearly—losing jobs, status, and in the case of political refugees, their homeland.

BY DENISE DEMONG

Demong edits the Books section.

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A TAX CUT MAY QUICKEN PULSES, BUT IT WON'T HELP THE ECONOMY

BY ALAN S BLINDER

Breaking the 1990 budget agreement might well send the bond market into a tizzy, thus canceling whatever benefits lower taxes would bring

ALAN S BLINDER IS THE GORDON S RENTSCHLER MEMORIAL PROFESSOR OF ECONOMICS AT PRINCETON AND THE AUTHOR OF *GROWING TOGETHER*

Should taxes be cut to revive the comatose recovery? In a weak economy such as the one we have today, fiscal action would normally be appropriate. But not here and not now. Congress is best advised to close the Pandora's box of tax-cutting plans quickly, before too many undesirables get out. This is a conclusion I come to reluctantly. It would certainly not have been my view a decade ago in a similarly stalled recovery, and I hope it will not be my view a decade from now. But after the unseemly budget spectacles of the past 10 years, it seems best to keep the fiscal arm tied tightly behind our backs for now.

In thinking through the merits and demerits of the myriad tax-cut proposals currently elevating political pulses, we must distinguish between tax cuts that are balanced by equal tax increases and those that are not.

A plan in the first category is permissible under the 1990 budget agreement. But it would not provide a wake-up call for the economy and so should not be marketed as Geritol for an anemic recovery. In a balanced-budget package, the tax-cut component would be a stimulant, but the tax hike would be a depressant of roughly equal magnitude. Recent history provides a case for raising taxes on the rich in order to lower them on the poor and middle class. But that case rests squarely on grounds of social justice, not fiscal stimulus.

HISTORY LESSON. Then why not support a simple redistributive tax package right now? I answer with another question: Who in America believes that our current President and Congress can, in an election year, craft a finely balanced bill that will deftly redistribute the tax burden without disturbing the fiscal balance? At other times and other places, I would be in favor of such a proposal. But not here and not now.

But what about unbalanced tax cuts that, while they bust the 1990 budget agreement, can at least be expected to give the economy a boost? Should we enact one? My answer, once again, is not here and not now.

First, we should not ignore the possibility that the recovery will pick up steam of its own accord, rendering any new fiscal stimulus not just unnecessary but counterproductive This scenario looked far more likely a few months ago than it does today. But history teaches that recoveries sometimes pause before resuming their upward climb.

Second, tax cuts might not even work in the current environment, in which fiscal pronouncements are routinely disbelieved. Suppose a relatively small tax reduction—and the huge budget deficit precludes more—induces a relatively large adverse reaction in the bond market. Then, rising interest rates might cancel out any stimulus from the tax cut, leaving the deficit larger and the economy no better off. This "Wall Street view" of fiscal stimulus is one I have often denigrated in the past: The historical evidence is certainly against it. But it sounds eerily plausible today.

As part of the sorry legacy of the 1980s, the bond market seems to have contracted a chronic case of the federal-budget jitters. This ailment was not cured by the five-year budget agreement of October, 1990, which, despite its bad press, was a big improvement over its predecessors. By remaining intact for a full 14 months, the agreement has already outlived the life expectancy predicted by the skeptics. Abrogating it now would destroy whatever meager fiscal credibility remains—and might even send the bond market into a tizzy.

MORE SPUTTERING? Third, in deciding what to do today, we must not lose sight of tomorrow. America's long-run problem is too little investment, not too much. A fiscal expansion that raises the deficit and interest rates is hostile to investment and therefore exacerbates the long-run problem. By contrast, a pick up in monetary expansion that lowers interest rates and promotes investment takes a step in the right long-run direction.

As we know, there has been a long-running debate within the Federal Reserve Bank over how hard to push the economy. So far, the Fed's performance has been good, if a bit timid. But if fiscal policy assumes the burden of supporting the recovery, the pressure will be taken off the Fed. I think we should keep it on. Central bankers perform better when they are sweating.

Some economists would push this last argument even further. Many believe that the Fed tries to use its control over short-term interest rates to steer the economy along a target growth path for gross national product. If this view is correct, then any additional forward momentum from fiscal policy will be automatically and fully offset by a throttling back of monetary policy. Such a shift of the policy mix toward bigger deficits and tighter money is precisely what Reaganomics gave us in the early 1980s. We do not need another dose now.

One question remains: If fiscal stimulus is not applied and the recovery continues to sputter, then what? The answer is implicit in what I have already said. Chairman Greenspan & Co., the country is relying on you. Please do your duty. We have a long way to go before the federal funds rate hits zero.

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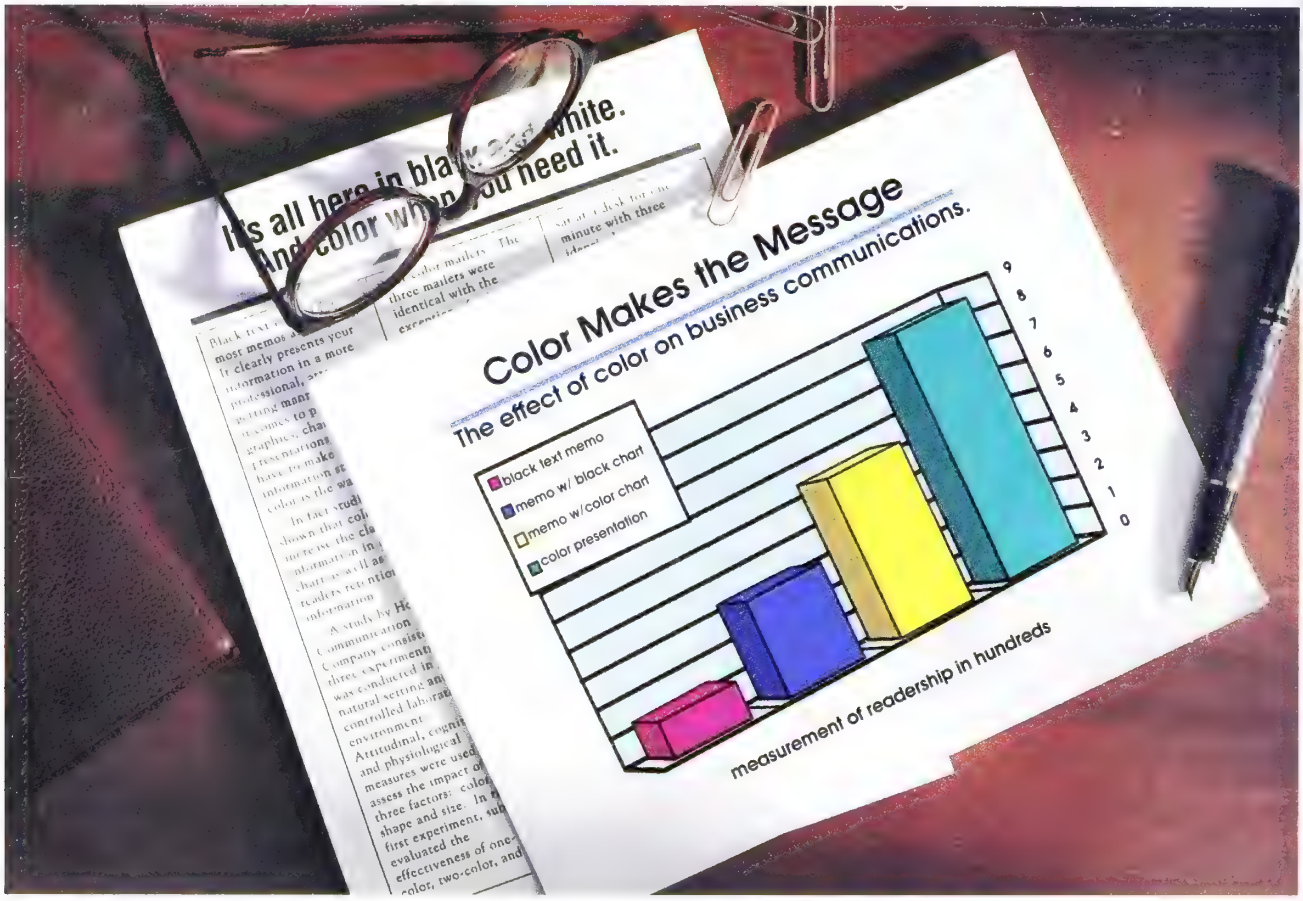

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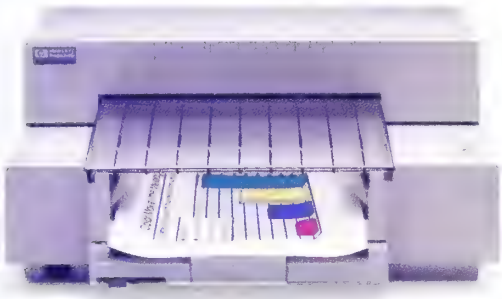

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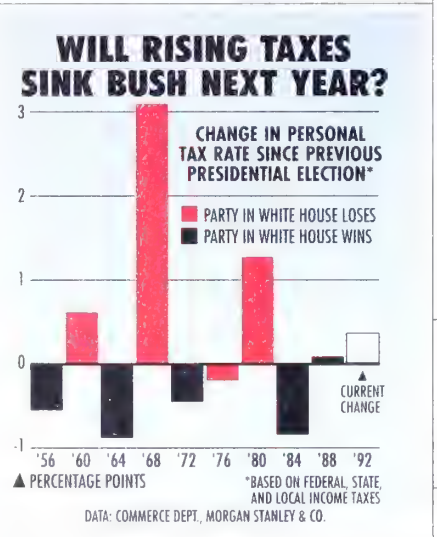
BY GENE KORETZ

THE ECONOMIC TEA LEAVES SAY BUSH COULD LOSE IN '92...

With the Presidential election less than a year away, a growing number of economists are dabbling in polimetrics, the arcane science of calculating how economic factors influence voter behavior. True believers assert that it is not a President's public image or statements that determine whether he (or his party) remains in the White House, but the state of the economy in the period before the election.

Not surprisingly, the current polimetric omens are hardly propitious for a Bush victory. Economists at Merrill Lynch & Co., for example, note that during the first three years of the Bush Administration, real aftertax income grew less than 1% a year. "Except for the demobilization period after World War II," they observe, "that is the worst record since the Hoover Administration." In the entire postwar period, no President or his party has ever been reelected when real disposable income grew less than 3.8% in the 12 months prior to the election.



Economist Stephen S. Roach of Morgan Stanley & Co. believes Presidential elections are heavily influenced by recent changes in income tax rates (which, of course, affect the growth rate of disposable income). A rise in the average rate between Presidential elections, he says, "is almost always followed by a change of party in the White House."

Roach calculates that the current rate—based on federal, state, and local income taxes—is more than one-third of a percentage point higher than it was in late 1988 (chart). Further, he notes that rising state and local rates and changes in the federal tax code, such as phasing out the personal exemptions at upper-income levels, imply that the tax take will move higher over the next year.

The catch to these auguries of doom for Bush, of course, is that the economic outlook may well brighten significantly by next November. Indeed, research by Ray C. Fair of Yale University indicates that it is the real growth rate of per-capita gross national product in the nine months before a Presidential election that determines the result.

Fair's econometric model predicts the percentage tally of votes in all Presidential elections since 1916 with an average margin of error of only three percentage points. It indicates that Bush should win handily if real GNP rises by at least 3.5% next year, but would face a close election if economic growth is close to zero. "The biggest threat to Bush would be a protracted double-dip in 1992," says Fair.

All of which suggests that the Republicans will opt for fiscal stimulus if the economy doesn't revive by yearend. And if they do, they're unlikely to get much resistance from Congress, because history suggests that flagging economic conditions also raise the risk of defeat for all incumbent legislators, be they Democrats or Republicans.

...BUT A BULL MARKET WOULD GIVE HIM A BOOST

While economists are pondering the relationship between politics and economic trends, Wall Street and investors, shaken by the market's recent pullback, are wondering what the election year holds for equities. Judging by past trends, the omens are positive. Wrights Investors' Service has looked at the record and reports that the stock market has risen 14.8% on average in the 22 Presidential-election years since 1900, and 20.4% in years when Republicans were incumbents.

How does the market's performance affect election results? Starting with 1888, Louise Yamada of Smith Barney, Harris Upham & Co. has analyzed 26 consecutive Presidential-election years. In 12 of the 15 instances in which the party in the White House remained in power, she reports, the market rose between the start of the year and election eve. By contrast, stocks were down in 5 of the 11 times that a new party captured the Presidency. Moreover, in 7 of those 11 instances, the market also declined during the post-election year.

If all of this seems to imply that Wall Street should be rooting for Bush, consider this: In 7 of the 10 times an incumbent President was reelected, the market was down in the following year.

AN INVENTORY PILEUP PROMISES TO MAKE WAVES OVERSEAS

An emerging inventory correction signals troubles for America's trading partners. To be sure, the latest cutbacks in U. S. industrial production and factory employment indicate that overly optimistic domestic producers contributed to a minisurge in stocks. But economist Richard B. Berner of Salomon Brothers Inc. thinks exporters to the U. S. may be taking a bigger hit.

Berner notes that between the first and third quarters, real merchandise imports jumped by some $58 billion, double the rise in domestic final demand. "The parallel upswing in inventories, especially at wholesalers and retailers, strongly suggests that a major portion of those stocks went into imports," he says.

The upshot, says Berner, is that imports are likely to slow significantly in the months ahead, as wholesalers and retailers try to bring inventories in line with demand. And while that will help the trade balance for a while, it will also add to the problems of sluggish economies overseas.

GLOBAL SLOWDOWN: EVEN GERMANY AND JAPAN ARE TAKING HITS

Just how badly are overseas economies faring? The Conference Board reports that its "international economic scoreboard" for November indicates that leading indexes of the major industrial nations have stopped rising—raising the risks of a global recession. And international economist William Sterling of Merrill Lynch notes that since last spring, total industrial output of the Group of Seven nations has been declining from its year-earlier level.

Meanwhile, the economy of western Germany contracted at a 2% annual rate in the second quarter, and the Japan Center for Economic Research says that the Japanese economy will post a 1.5% annual drop in the third quarter. "The global picture," says Sterling, "is increasingly that of a 'single scoop' recession, led by the Anglo-Saxon nations and now joined by Japan and Germany."

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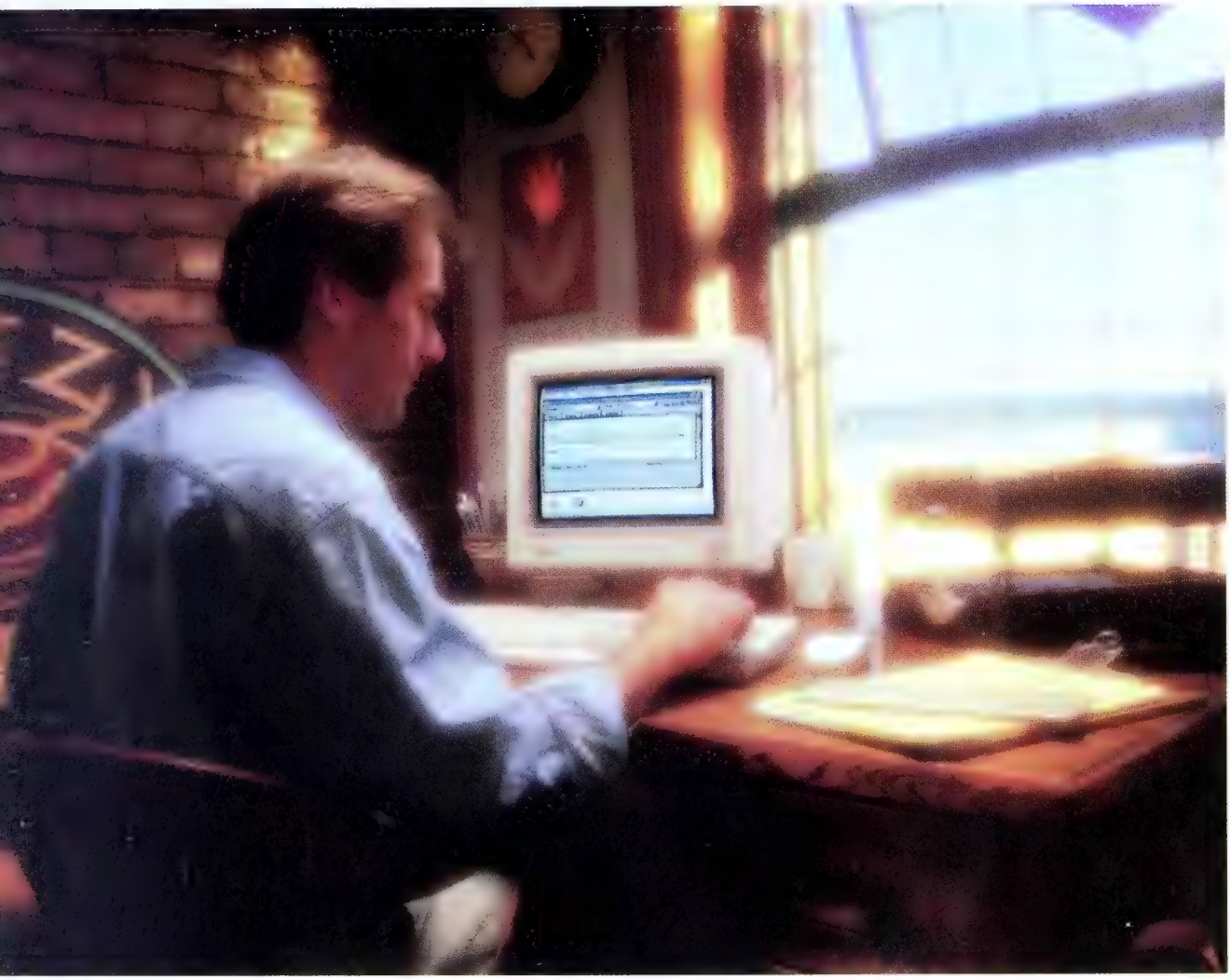

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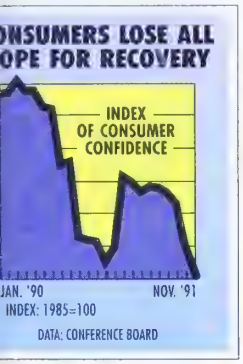
CEMBER 9, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

T'S BEGINNING TO LOOK A LOT LIKE DOUBLE-DIP

is the season to be jolly—unless you're a retailer. In that case, you might be scared stiff, worrying whether consumers are going to be in a spending od as Christmas shopping shifts into high gear. Based many of the early indications for November, store ners have good reason to fret.

New filings for unemployment benefits are rising, and nsumer confidence has fallen to recession levels art). Because household spending this year has risen ice as fast as incomes, consumers began the fourth arter with the lowest savings—and the highest debt—any comparable period in past recoveries. Worse still, e tax bite on consumers has risen to a postwar record.



Some of the lowest interest rates in more than a decade should be a boon to consumer finances, but many key borrowing rates for households have not come down as much as the Federal Reserve's easing of monetary policy would imply. Aside from falling mortgage rates, which are helping housing, lower rates have not been much of a tonic for demand.

In fact, the sharp drop in interest rates may be hurting consumers more than helping. Households earn six nes as much interest as they pay, and interest income in its steepest annual slide in the postwar era. Older ople, who save more, are being hit especially hard.

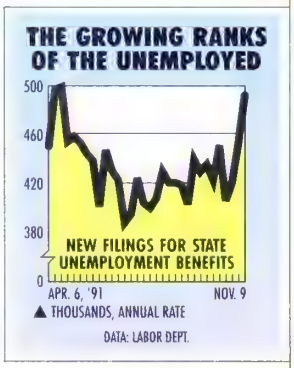
A GOOD JOB IS HARDER TO FIND

Add to all this the perception that Washington is long on rhetoric and short on solutions, and it is no wonder that consumers have lost all faith in the recovery. e Conference Board's index of consumer confidence is a free-fall. In November, it tumbled 9 points, to 50.6, ter plunging 13 points in October. Confidence is now low the low point during the Persian Gulf war. In fact, nfidence now stands at an 11-year low, surpassing en the worst reading of the 1981-82 recession.

Consumers expressed increasing concern in November out both their present situations and their expectaons for the next six months. Also, the gloom spread ross all regions, age groups, and income levels. Acrding to the Conference Board, the pattern during the st two months is "the classical profile of recession."

Consumers also scaled back their buying plans in Nomber, a survey result that was supported by the latest op in car sales. Domestically made cars sold at an annual rate of 5.9 million in mid-November, after slumping to a 5.7 million pace early in the month, which was down from 6 million for all of October. That suggests more cuts in auto production this winter, which would further depress overall industrial output.

The main reason consumers are so downbeat is the drab employment picture. The board reports that pessimists are outnumbering optimists on the job outlook by an increasingly wide margin. In November, 47.9% of those surveyed said that jobs were "hard to get." That was a big rise from 43.5% in October.



Consumers' job worries are rooted in reality. Excluding the growth in health care jobs, employment has barely risen since April. And now, jobless claims are climbing again, after falling in the spring and summer.

The speed of the rise is ominous. Claims jumped by 39,000 in the week ended Nov. 9, to an annual rate of 493,000, after climbing by 33,000 in the week before. Filings are the highest in seven months (chart).

Since claims are volatile from week to week—and usually fall during holiday weeks—the four-week moving average is a better indicator. It stood at 444,000 on Nov. 9. In the past, an average of near 500,000 has been a clear sign of recession. The jump so far, however, has been large enough to suggest that payroll employment in November is likely to post a drop when the Labor Dept. reports the month's job numbers on Dec. 6.

If so, the Fed may have to consider easing policy yet again, especially since the economy looks increasingly as if it is sliding back into recession. The Fed has cut the federal funds rate 13 times since mid-1990, and a further chop before yearend cannot be ruled out. Another cut in the discount rate may come this winter as well.

HIGHER TAXES ARE DRAINING INCOMES

On top of worries about jobs and incomes, consumers are also saddled with higher taxes. So far in 1991, taxes—federal, state, local, and social security—have risen to a record 20% of personal income. And that excludes property and sales taxes. The tax bite declined in all previous recessions, but this time it has risen.

The same pattern is true for the economy as a whole. During the first three quarters of the year, all revenues received by federal, state, and local governments—excluding federal grants to states—rose to a record 32.7%

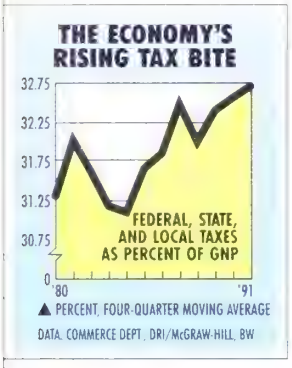
ERIC HOFFMANN/BW

of gross national product (chart), up from 32.5% in 1990 and 32.4% in 1989. Each rise of 0.1% increases the economy's tax burden by some $6 billion.

During the 1981-82 recession, the tax bite shrank by nearly a full percentage point. Ironically, the huge budget deficit that arose from that tax cut is now paralyzing any effort to stimulate the economy through fiscal policy. The deficit as a percentage of GNP in 1992 is destined to balloon back toward the record 6.3% hit in 1983.

HOME SALES HEAD UP FROM THE BASEMENT

Despite their burdens and their sour mood, consumers are showing some renewed interest in home-buying. Sales of existing houses increased 1% in October, to an annual rate of 3.15 million. Even though sales in the economically depressed Northeast continued to fall for the third month in a row, resales in the Midwest, South, and West all increased in October.

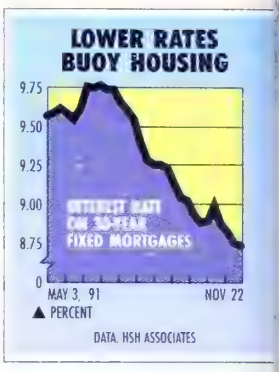


The gain in existing-home sales suggests that lower interest rates are finally having an effect. It actually may have been the small rise in rates at the end of October, however, that pushed people into buying houses during the month, rather than waiting.

The average rate on a 30-year fixed mortgage hit 8.89% in mid-October and then bounced back to 9% by the end of the month—the result of tax-cut talk in Washington that pushed up all long-term rates. Faced with uncertainty about the future direction of rates, consumers in October may have decided to take advantage of the lowest mortgage rates in 14 years.

By mid-November, however, rates had resumed falling, to 8.74% by the week of Nov. 22 (chart). While lower rates have made home-buying more affordable, the steep November fall in confidence suggests that fewer consumers may have entered the housing market.

Builders are feeling the effects of consumer caution, and their pessimism may signal that the housing industry is not out of the woods yet. A National Association of Home Builders survey suggests that sales of new single-family houses were lackluster in both October and November. And 39% of NAHB members say prospects are "poor" for new-home sales over the next six months. That's a big jump from the 30% in October.



The NAHB report also said that buyer traffic slowed in November. Even so, the steady upturn in contracts for new housing suggests that some builders are going ahead with projects.

New contracts for all construction rose 9.2% in October, to an annual rate of $247.4 billion, according to the F. W. Dodge Div. of McGraw-Hill Inc. Residential contracts increased 3.1%—the seventh gain in nine months. Housing contracts are 16.5% higher than a year ago.

Demand for nonresidential buildings jumped almost 20%, but that followed a 20.4% fall in September. In general, the outlook for nonresidential construction remains poor.

That leaves housing to provide the jobs and economic growth needed to lift the overall construction sector. In addition, increased home-buying raises spending on such related goods as appliances, textiles, and furniture.

Boosting housing demand, however, depends on consumers feeling confident enough about the future to shoulder the burden of a mortgage. But judging by the Conference Board's latest report, it will take more than lower interest rates to pull consumers out of their holiday funk—and back into a spending mood.

THE WEEK AHEAD

LEADING INDICATORS

Monday, Dec. 2, 8:30 a.m.
The government's index of leading indicators was likely unchanged in October, say economists surveyed by McGraw-Hill Inc.'s MMS International. In September, the index fell by a small 0.1%.

CONSTRUCTION SPENDING

Monday, Dec. 2, 10 a.m.
Outlays for building projects likely fell by 0.1% in October, say MMS economists. That follows a 1.1% gain in September.

NAPM SURVEY

Monday, Dec. 2, 10 a.m.
The National Association of Purchasing Management's index of business activity probably fell to 52.2% in November, down from 53.5% in October.

NEW SINGLE-FAMILY HOME SALES

Tuesday, Dec. 3, 10 a.m.
New houses probably sold at an unimpressive annual rate of 460,000 in October. In September, sales plunged 12.9%, to 446,000.

GROSS NATIONAL PRODUCT (REVISION)

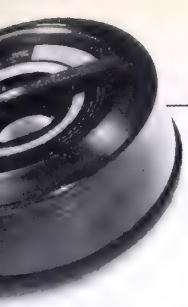
Wednesday, Dec. 4, 8:30 a.m.
The economy likely grew at a revised annual rate of 2.7% in the third quarter, says the MMS consensus. That's a bit better than the 2.4% pace originally reported. The GNP report, however, will contain major revisions, including the usual annual benchmark revisions, a change in the base year for indexing prices to 1987 from 1982, and the measuring of the economy's growth using the gross domestic product instead of the national product. These shifts will paint the 1990-91 recession as worse than first thought.

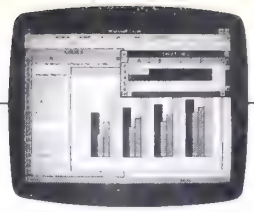
FACTORY INVENTORIES

Thursday, Dec. 5, 10 a.m.
Factory inventories likely were flat in October, after rising 0.4% in September.

EMPLOYMENT

Friday, Dec. 6, 8:30 a.m.
Nonfarm payrolls are expected to have fallen by 25,000 in November, following a 1,000 drop in October. The November jobless rate probably rose to 6.9%, up from 6.8% in October.





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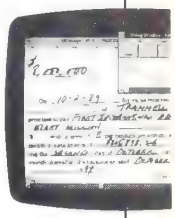

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WANG OFFICES THAT WORK

HOW DEEP IS THE HOLE?

SAVING THE BANKS AND BOLSTERING THE FDIC MAY COST HUNDREDS OF BILLIONS

In the late 1980s, when the nation's banks began collapsing in numbers unseen since the Great Depression, skeptics immediately feared the worst: a slow-motion replay of the savings and loan debacle, which is expected to cost taxpayers $160 billion—before interest. But policymakers in Washington hotly dismissed any notion that banks would lighten Uncle Sam's wallet as they followed the S&Ls' path to oblivion. As recently as April, L. William Seidman, then chairman of the Federal Deposit Insurance Corp., promised Congress: "Taxpayer money is not required."

How times have changed. The fund that insures bank deposits, flush with an $18.3 billion surplus in 1987, is now virtually broke. And the FDIC projects a deficit of as much as $28.9 billion in two years. Battered by bad loans to real estate developers, takeover artists, and Third World countries, nearly 900 banks, with assets of $162 billion, have failed since 1987. To shutter these institutions, the Bank Insurance Fund has paid out $56 billion and expects to recoup no more than a third of that. And as a sign of trouble to come, the size of the ailing institutions is soaring (chart).

On Nov. 25, Seidman's successor, William Taylor, gave Congress a grim prognosis: Anything short of the $70 billion injection of funds the Bush Administration is seeking could boost the costs of bailing out banks even further. "We need the money to do the surgery that must be done," he told the Senate Banking Committee. "Any kind of a piecemeal approach would be a mistake."

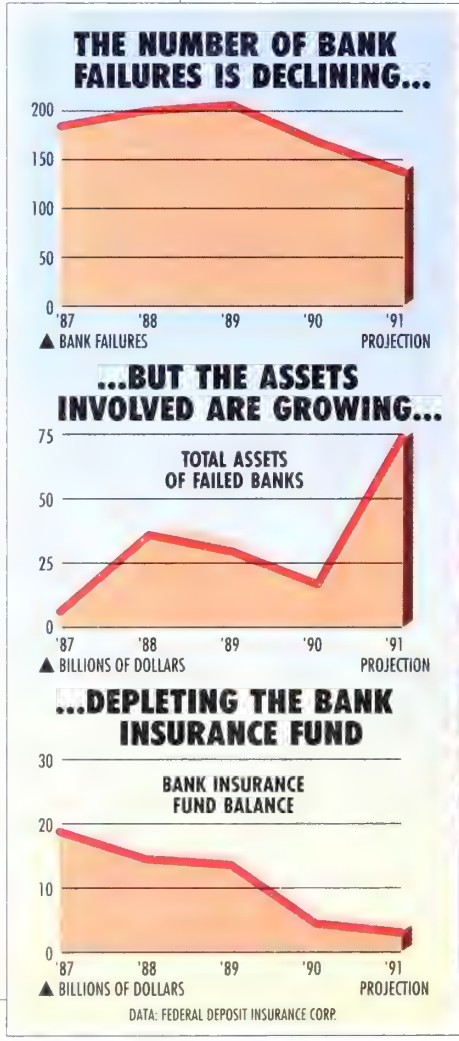
NO LOAN. With no end in sight to the banks' woes, a growing number of Democrats and Republicans on Capitol Hill believe a taxpayer bailout is all but inevitable. At the Nov. 25 hearing, Senate Banking Committee Chairman Donald W. Riegle Jr. (D-Mich.) warned his colleagues that they shouldn't vote on the money bill "thinking that it's only a loan to the deposit-insurance fund, when in fact these funds will not be repaid." Echoed ranking Republican Jake Garn (R-Utah): "I do not think $70 billion ultimately will be enough."

How deep is the hole? The sums could be staggering. Cleveland State University economist Edward W. Hill predicts that the tab for reviving the banking system could top $180 billion, even if the economy improves. He calculates it would cost $52 billion to repay depositors and sell assets of failed banks. The nation's 12,000 largest banks would need $128 billion more from the private sector to meet a stiff new capital standard—6% of assets—set by international agreement.

Hill's figures don't include the stunning costs to the public of the banks' past lending indiscretions. As banks try to shore up their profits and capital, they're charging customers unusually high rates of interest, compared with the banks' borrowing costs. From 1988 through 1990, the gap between the prime rate and the banks' cost of money, as measured by the federal funds rate, hovered at about 1.75 percentage points. But throughout this year, the spread has been a full percentage point higher (chart, page 32). For the $600 billion in commercial and industrial loans that are pegged to the prime, that translates into an extra $6 billion in interest annually.

Partly as a result of that fat spread, banks aren't in such dire straits as the S&Ls were when their death spiral began. Moreover, banks have $242 billion in equity capital, whereas the thrift industry as a whole was insolvent as far back as 198[illegible]. But a far smaller percentage needs to tumble into insolvency for the bank bailout to approach the thrift rescue's dimensions.

Those insolvencies aren't a mere theoretical abstraction. During the first six months of 1991, the last period for which industry data are available, roughly half of New England's 248 banks lost money



SIGNS OF THE T[illegible]

ationwide, one in eight nks was unprofitable. hat banking experts and gulators fear most is at California, where the cession is hitting late, ll be the next disaster ea. With the state's key dustries—defense and mputers—in a funk, nks in the Golden State ported a 42% slump in in- me through June, in part cause of a 68% surge in nperforming real estate ans.

TAYLOR: "WE NEED THE MONEY TO DO THE SURGERY THAT MUST BE DONE"

Bumpier roads may lie ahead if the tional economy doesn't rebound rongly in coming months. Many banks ll haven't fully acknowledged the ex- nt of their real estate lending mis- kes. While banks' troubled loans have ared, loan-loss reserves have shrunk 65% of nonperforming loans, down om 86% two years ago, according to ustin (Tex.) bank consultant Alex She- unoff. Clearly, banks are gambling at the recession will end soon, but reg- ators are in no hurry to declare a turn- around. "I have no idea if things will get better or if they'll get worse," says the FDIC's Taylor.

Washington may not be helping matters. To replenish the bank insurance fund, Taylor has proposed that deposit-insurance premiums be raised to 30¢ on every $100 in deposits. That's more than double the 12¢ premium levied last year and could cut industry profits as much as 8%, according to bank-stock brokerage firm Keefe, Bruyette & Woods Inc. Even Seidman fears that "the premium rate being discussed is so high that it could damage the entire industry."

Bank executives complain that the hike would squeeze their profits at the wrong time. First Union Corp. in Charlotte, N. C., which has seen profits drop 8% this year, to $230 million, figures the higher premium would increase its expenses next year by $23 million, or 11¢ a share. Unwilling to take such a hit, First Union Chairman Edward E. Crutchfield Jr. has ordered his managers to slash their budgets by the same amount.

Some less visible moves by regulators could also add to the bailout's cost. Hobbled by inadequate funds, bank regulators are moving more slowly to shutter troubled banks. As of June 30, more than 40 insolvent banks were still operating, according to Wakefield (Mass.) consultants Veribanc Inc. Similar "forbearance" by thrift regulators, according to the Congressional Budget Office, increased the cost of the thrift bailout by about $66 billion.

ROSIER PICTURE. Bank regulators are using a variety of devices to postpone the day of reckoning. In June, House Banking Committee Chairman Henry B. Gonzalez (D-Tex.) disclosed that the Federal Reserve had been quietly propping up hundreds of troubled banks by extending credit through its discount window. Among Gonzalez' findings: 418 banks received short-term Fed loans whose balance due was continually rolled into new borrowings. Of those, 90% ultimately failed. In the case of Bank of New England Corp., the Treasury Dept. had also increased its deposits of tax receipts. "If we learned nothing else from the S&L crisis, we learned that forbearance did not work," says Clemson University Professor Michael Spivey.

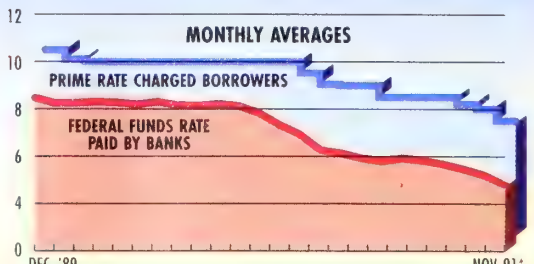
Yet another trick

S: IT'S BEGINNING TO LOOK AS IF A HUGE BAILOUT IS INEVITABLE

(TOP TO BOTTOM) PHOTOGRAPHS BY JAMES GOLBURN PHOTOREPORTERS, PHIL HUBER BLACK STAR; CHARTS BY ALBERTO MELLA BW

may soon be available to banks—and regulators—hoping to paint a rosier picture of the industry's capital position. Under an expected rule change by the Financial Accounting Standards Board (FASB), public companies could, in effect, report deferred tax credits as current income. But the deferred taxes assume that profits will be earned in future years. For some banks, those earnings may never materialize. The rule change would come as a particular windfall for the big New York banks, which could boost their net capital by as much as 24%, according to Brent B. Erensel, an analyst at Mabon Securities Corp. in New York. The new rule "is going to play right into the hands of bank regulators who want to avoid shutting down banks that are in financial difficulty," says former FASB Director Raymond C. Lauver.

RATES ARE LOWER FOR BANKS—LESS SO FOR THEIR CUSTOMERS



DATA: FEDERAL RESERVE

Regulators insist that they will continue to be tough on the industry. They won't ease up on stiff standards for capital which provides a cushion for loan losses—and for the Bank Insurance Fund. But much of the damage has already been done. The big question now is how Congress will go about repairing the system. Bankers themselves aren't optimistic. "Congress doesn't do anything in a visionary way," says First Wachovia Corp. Chairman John G. Medlin Jr. "I think it's going to be a process of running from crisis to crisis for a while."

By Dean Foust, with Mike McNamee, in Washington, with Chuck Hawkins in Atlanta and Robert Neff in Tokyo

COMPUTERS

SUDDENLY, AMD IS IN THE CHIPS

Its 386 microprocessor is selling fast and cutting into Intel's market

Compaq won't comment. Intel won't comment. IBM won't say much. But Jerry Sanders is crowing.

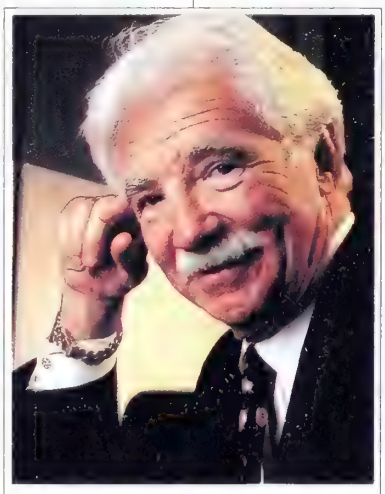
Sanders, the irrepressible chief executive of Advanced Micro Devices Inc., is all pumped up about his company's swift move into the market for 386 microprocessors, the chips used in most personal computers sold today. And he's close to a big win: Giant PC maker Compaq Computer Corp. is set to ink a deal to buy 386 chips from AMD. Sanders says IBM may be next. "I expect Compaq and IBM to be customers in 1992," he says.

Sure, the two companies will continue to purchase most of their chips from Intel Corp., the Silicon Valley monolith that designed the original 386 chip. But for AMD, even small sales of its 386 knockoffs to the PC industry's big guns "would be incredibly important to its image," reports Mark Cuban, president of CompuServe Systems Integration Group, a Dallas-based retailer of Compaq computers.

SURPRISES. Even without final deals with IBM and Compaq, business is booming for AMD. Since last March, when the company first shipped its Am386 chips, AMD has signed up more than 200 customers. And 1991 sales have far exceeded Sanders' forecast of $47 million: AMD will sell $200 million worth of the chips, for a 14% share of the market, Sanders now says.

Surprises of that sort have Wall Street crowing, too. AMD's stock has doubled from 7 at the start of 1991 to about 14 today. And analysts are busy ratcheting up earnings forecasts: Michael N. Gumport, an analyst at Shearson Lehman Brothers Inc., says AMD this year will earn $110 million on total sales of $1.2 billion. He sees profit next year of $142 million on total sales of $1.5 billion. That's a big improvement over last year, when AMD lost $54 million on sales of $1.1 billion.

AMD's jump into the 386 market turned its balance sheet around, even while it nudged the balance of power in the PC business. Before AMD came along, Intel had a monopoly in what has become a $1.4 billion annual market for the 386 chip. To woo Intel customers, AMD tweaked the 386 chip's design. Its versions are faster and use less power—a big plus for laptop makers.



AMD'S SANDERS: IF HE BAGS COMPAQ, CAN IBM BE FAR BEHIND?

The improvements persuaded Compaq to consider AMD's chips for an upcoming line of PCs, which Compaq chief Eckhard Pfeiffer is describing as "low-price, high-quality." Although AMD's 386 chips generally cost the same as those from Intel, Compaq could employ the higher-performance processors as a way of differentiating its PCs from those of the clone-makers that have cut badly into Compaq's market share, says CompuServe's Cuban.

IBM's interest in AMD chips is murkier. Big Blue in early November announced a joint development agreement with Intel that weds it to Intel's microprocessor designs. And IBM makes its own speeded-up version of the 386 under a licensing agreement with Intel. But Big Blue may want AMD's low-power-consumption 386 chips for notebook or palmtop computers. For now, an IBM spokesman will say only that the company has "no plans at this time" to buy PC chips from "anyone but Intel."

MIMICRY. Meanwhile, AMD is plotting its next move: A 486-chip clone. Whether its gift for mimicry will work on the fancier chip is a question. And some wonder whether AMD can keep up with future Intel products, especially since Intel put $1.7 billion into research and capital equipment this year. "As soon as Intel comes up with something that can't be copied, AMD gets blown out of the saddle," says Erik N. Jansen, analyst at Robertson Stephens & Co.

Then there's the chance that AMD will lose a copyright-infringement suit Intel has filed against it or that 386 chip clones from still fresher competitors will sell well against AMD's products. Indeed, there are numerous ways for AMD to trip up. But Sanders says he isn't worried. Instead, he is projecting that AMD's 386 chip sales will increase by half or even double during 1992. And that, he figures, is something worth crowing about.

By Russell Mitchell, with Kathy Rebello in San Francisco

OUT OF ONE BIG BLUE, MANY LITTLE BLUES

hairman John Akers thinks shock therapy will get IBM moving

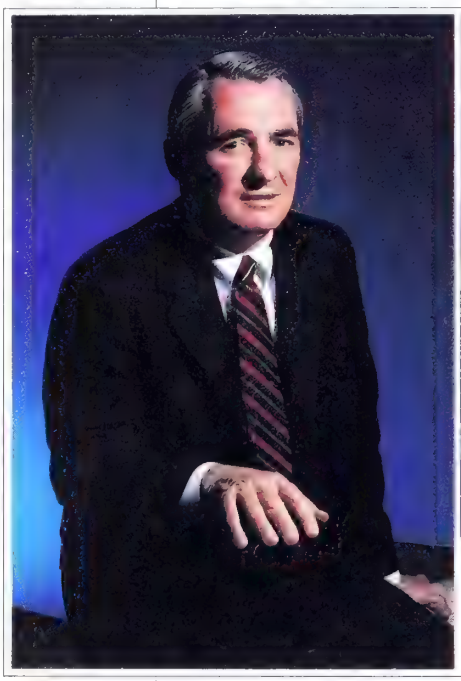
Over the past several years, IBM has announced a startling series of changes that were supposed help the computer giant adapt to a adically shifting marketplace. The anges were earthshaking for a compa- that had known only monopoly prof-, industry dominance, and incredible owth for at least three decades: shed- ng some 54,000 employees through a lf-dozen early-retirement programs, organizing itself in the U.S., shut- ng factories and spinning out mar- nal businesses such as pewriters, and invest- g several hundred mil- n dollars in dozens of mpetitors.

All those moves, jolting they were, didn't come ose to getting IBM back track. It needed even ore of a shakeup. And w, Chairman John F. kers has unveiled a se- es of changes that are pposed to remake IBM. ne centerpiece: a still gue but thorough reor- anization that will grant anagers new autonomy hile stepping up the ressure on them.

HOCK THERAPY. The rategy is a risky one, nce many of IBM's com- titors, particularly the apanese, are massive onoliths. But by break- g the company into distinct business nits, Akers is handing managers more sponsibility for controlling costs and eveloping strategies for a market com- osed of an increasingly varied array of roducts and services. And if the manag- rs can't generate enough profits, it will e easier for Akers to prune the division.

Akers launched his shock therapy on ov. 25 by sidelining George Conrades, eneral manager of IBM's U.S. business, nd replacing him with Robert J. La- ant, most recently head of IBM's mini- mputer business. Conrades had been ne of two likely successors to Akers. ow, the sole credible candidate is Con- ades' ex-rival and new boss, Senior ice-President C. Michael Armstrong.

The next day, Akers sketched out dra- atic plans to reshape IBM into a set of holly owned but more or less autono- mous marketing, service, product development, and manufacturing companies. Each will report its own financial results, retain its own board of directors, and be managed with an eye for maximum return on assets. In addition, IBM said it will rid itself of 20,000 more workers in 1992. Even before the $3 billion charge IBM will have to take, analysts had expected 1991 earnings to be 58% below last year's $10.50 a share. But the payroll cuts and other changes should provide savings of about $1 billion in 1992 and about $2 billion a year from then on, says the company. That would boost gross margins, which have sagged to about 51.5% this year from 57% as recently as 1988. That's why IBM's stock rose 2¾, to 97⅞, on the news.



SHUFFLED: AKERS HAS SIDELINED CONRADES, ONCE A CANDIDATE FOR THE TOP SPOT

The reorganization could amount to no less than a revolution in the way IBM does business. "What we're seeing is the beginning of the dismantling of the IBM company," says Rick Martin, a former IBMer and computer analyst at Prudential Securities Inc. Details are still sketchy—senior executives will learn more on Dec. 4 and 5, and Wall Street will get the skinny on Dec. 9—but it's already clear that unit managers will have far more latitude than before. In return, they'll have to be far more attentive to the bottom line.

The key is the shift in IBM's focus to return on assets. That's the measure that supermarket managers look at—and like it or not, the computer industry has become the same kind of low-margin, commodity-oriented business.

Within that discipline, managers will have unprecedented freedom of action. Managers in the personal-computer division, for instance, will now be able to get into mail-order sales. IBM's marketing managers could bundle components from other manufacturers together with IBM gear and sell the packages to their increasingly demanding customers.

There's a downside to that flexibility. IBM's emphasis on return on assets, says Martin, signals that the company, after getting its new autonomous business units established, is likely to divest those that don't live up to its goals.

The business units that stand to gain the most are the ones that face the most competition—PCs and workstations. IBM's personal computers have had to carry overhead from mainframes, even as they competed with PC clones from highly focused competitors such as Dell Computer Corp. and AST Research Inc. "Clearly, they've got to get the overhead out of the low-margin product divisions," says James L. Cassell, a former IBMer who tracks the company at Gartner Group, a Stamford (Conn.) consulting company. By the same token, mainframes would have to carry more of their own overhead, which might end the vicious discounting IBM has employed against Amdahl Corp. and Hitachi Data Systems.

TRUE TEST. The moves are by no means a guarantee of success. "This addresses the expense side of the equation, but the big unknown is revenue growth," says Stephen Cohen, an analyst at Soundview Financial Group Inc., a Gartner Group affiliate. IBM revenues this year will suffer their first decline in decades, to an estimated $65 billion, from $69 billion last year. Wonders Cohen: "Will the restructuring result in IBM speeding up development cycles and bringing out more competitive products?"

That, in the end, is Akers' true test. It's his last-ditch effort to save the company from seemingly endless decline. With his retirement looming in 1994, he doesn't want to be remembered as the man who presided over IBM's decline into mediocrity.

By John W. Verity in New York

PHOTOGRAPHS BY SHEILA VALESKA

LABOR

WALTER SHEA'S CANDIDACY SPLIT THE OLD GUARD

THE OTHER INSIDER, R. V. DURHAM, CALLS FOR REFORM

RON CAREY IS THE ONLY TRUE DISSIDENT RUNNING

THE TEAMSTERS TRY SOMETHING NEW: DEMOCRACY

Finally, the rank and file gets a direct say in picking national leaders

In an odd way, the recession has bolstered organized labor by focusing public attention on such bread-and-butter union issues as joblessness and the gap between rich and poor. But no event is likely to help labor's image more than the election now under way in the International Brotherhood of Teamsters—the nation's most visible union.

The mail-in balloting, which started Nov. 7 and ends Dec. 10, gives 1.6 million Teamsters their first chance to vote directly for their president, secretary/treasurer, and 16 vice-presidents. That's a dramatic break with the past, when these 18 officials politicked among themselves—often influenced by Mafiosi—to pick a president. Indeed, the hotly contested election for a five-year term in the $275,000-a-year post has become a close race among three candidates, including a local reformer.

WHITE HATS. Regardless of who wins, the union that emerges will be cleaner than it has been since the mob muscled its way in more than 40 years ago. The antigraft campaign run by Ron Carey, the dissident candidate from Long Island City, N. Y., has driven the other candidates into a bidding contest to see who can be most forceful against corruption and fat union salaries. "This election has a chance to have a really big effect on the image of unions," says Thomas Kochan, a labor expert at Massachusetts Institute of Technology.

The Teamsters' transformation began with a 1988 racketeering lawsuit filed by the U. S. Attorney's office in New York. To avoid a trial, union officials agreed to a series of changes. A court-appointed investigator was given authority to look into corruption and Mafia links. So far, he has charged 138 local and national officials, including Joseph Trerotola, the octogenarian kingmaker known as Joe T., who left when faced with charges that he had tolerated mobsters in his New York union council. Since his departure on Oct. 25, only one top union officer with alleged links to organized crime—President William J. McCarthy—remains in office, and McCarthy isn't running for reelection.

To settle the federal suit, the union also agreed to allow another court appointee to set up the unprecedented direct election for top officers. The first step involved rank-and-file voting for delegates to the union's convention last June. The delegates then nominated candidates to run in the current election.

Democratization has split the old guard. One faction, led by McCarthy, nominated R. V. Durham, a longtime official from North Carolina. Joe T. chose Walter Shea, who has been the assistant to the past four Teamsters presidents.

Most astonishing was the delegates' nomination of Carey, who makes $45,000 a year as the head of a 7,000-member local composed mostly of United Parcel Service Inc. workers.

JET SALE. Carey's presence has turned everyone into reformers. Convention delegates voted to sell off the union's five jets and to raise strike benefits from $50 a week to $200. On the campaign trail, Shea has called for a $10-an-hour "Teamsters minimum wage"—a far-fetched idea in a union that includes thousands of farm workers earning less than $7 an hour. And Durham's platform puts ending corruption first on the list. "We have to prove that we're willing to remove the 2% of local officers who are bad," says Durham.

But since Carey is the only real outsider, his rivals are running scared. Both Durham and Shea concede that a low turnout would benefit Carey. But neither has made a move to bow out.

A poll that Carey commissioned in October gave him 29% support, Durham 12%, and Shea 7%. It also showed that less than 45% of members knew anything about the candidates or planned to vote. Many members barely even know they're in the Teamsters, a vast, decentralized organization that sprawls across 50 states and Canada. "I don't know any of [the candidates], and I'm not planning to vote," says Leah Brown, a Teamster who works at the Palm City (Fla.) facility of Action Reprographics Inc.

Members who are voting seem to be in a throw-the-rascals-out mood. Carey's poll showed corruption to be the No. 1 issue among those who plan to vote. One telling sign: On Oct. 23, McCarthy lost by more than 2 to 1 in a race for his old job as president of his hometown Boston local. "There comes a point where members want to clean this thing up and break with the past," says Jim Lauer, the president of Lauer, Lalley & Associates, the Washington firm that did Carey's poll.

It may take time for the public perception of the Teamsters to change. But after December, labor's opponents may have to look elsewhere to joke about fat-cat union bosses and their mobster pals.

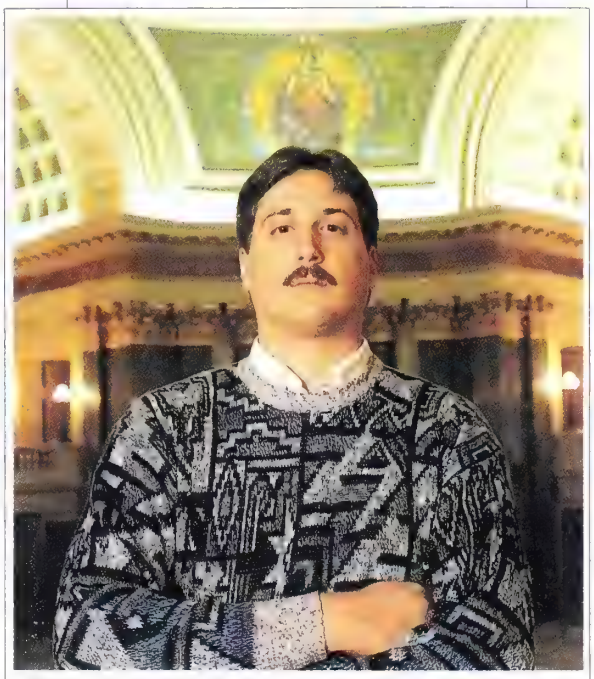
By Aaron Bernstein in New York

IOBODY IS RESTING EASY AT SIMMONS

he slumping mattress maker faces a lawsuit over its ailing ESOP

Alan L. Mundt, a former mechanic at the Simmons Co. plant in Janesville, Wis., thought he could ax with a pretty safe nest egg. When e mattress manufacturer announced in nuary, 1989, that it was being sold to employee stock ownership plan, ndt recalls, "they told us that some- e earning $20,000 a year could make 00,000 on the deal in 10 years' time." Things didn't work out that y. Mundt and his fellow employ- s were dismayed to see the com- ny newsletter report that their ck in Simmons plummeted from initial value of $4.10 a share to t, based on the company's net rth (table). Recently, Mundt left mmons for a better-paying job, t he still has plenty of retire- nt savings tied up there. And w he and Jennifer A. Florin, a mmons quilt operator, are suing ecutives involved in the deal for each of fiduciary duty.

SSY DEAL. The suit, filed in U. S. strict Court in Madison, Wis., al- ges that Simmons executives ervalued the company before ling it to the ESOP. Among the fendants: former Treasury Sec- tary William E. Simon and Wes- y Capital Corp., a well-known O boutique that helped engineer e ESOP. If the lawsuit gains ss-action status, Simmons em- oyees could ask that more than 00 million be returned to the ESOP. Details from court documents and oth- sources show how Wesray, which is own for such successful LBOs as Gib- n Greetings Inc. and such ESOPs as vis Inc., got caught in such a messy al. Wesray first showed up on the ene in 1986, when it helped a manage- nt group buy Simmons from Wickes s. for $120 million. Healthy growth in e mattress market and profitable as- set sales allowed Simmons, maker of Beautyrest and Maxipedic mattresses, to pay off most of the debt within two years. That's when Wesray and Simmons management decided it was time for them to cash out. They sold Simmons in 1989 to the ESOP for $241 million—a lofty 11 times operating income. Simmons Chief Financial Officer Harlan B. Smith says the hefty price was justified:



MUNDT: "THEY TOOK A GREAT COMPANY AND RUINED IT"

"We were just coming off our best year ever," he says. "The value of all companies in the industry went down the next year." The reason: The home furnishings market took a pummeling as homebuilding slowed down.

Simmons workers were vulnerable. Although the employees didn't have to put up any cash, and money in Simmons workers' retirement accounts wasn't used to finance the ESOP takeover, the ESOP stock was intended as the retirement vehicle, so the company stopped making contributions to the pension fund. Like most such '80s-era deals, the Simmons ESOP was financed with bank debt—in this case, $149 million worth—and various grades of privately placed debt and preferred stock.

Falling profits made it difficult to make payments on the debt, and Simmons managers couldn't sell assets at the fancy prices they had been counting on. Less than a year after the ESOP, Simmons defaulted on a $15 million loan from Chemical Bank.

Simmons managers persuaded Merrill Lynch Capital Partners Inc. last March to buy 61% of Simmons for $32 million. That left managers with 7% and slashed the ESOP's 70% stake to 32%. Workers weren't the only ones to take a haircut. Before Merrill would touch the deal, it insisted that Wesray and Simmons management partners forgive all of the senior and junior subordinated debt still owed them by the ESOP. In addition, Ray Chambers, a Wesray co-founder—who, like Simon, is no longer with the company—invested $5.5 million in the Merrill deal. Neither Simon nor Chambers could be reached for comment.

ROSY FUTURE? Mundt and his lawyers are hoping to convince the court that Wesray and Simmons management acted in their own self-interest, not in the interest of Simmons employees, which the federal law governing pension funds demands. Some Simmons managers dismiss the suit as nothing more than harassment by the Amalgamated Clothing & Textile Workers Union, which recently lost a vote at the Janesville plant. The union is helping Mundt and Florin sue the company.

Smith and Merrill Lynch execs are satisfied that Simmons' healthier balance sheet and its moves to cut costs position it well for the future. That's little consolation for Mundt. "They took a great company and ruined it with debt," he says. And even if Simmons now enjoys a strong turnaround, employees only get a third of the action.

By Walecia Konrad in Atlanta

SIMMONS' WOES

1986
Wesray Capital and a management group buy Simmons from Wickes in a $120 million leveraged buyout

1989
Management and Wesray sell Simmons to an employee stock-ownership plan for $241 million. ESOP shares are valued at $4.10

January 1991
Share price dips as low as 50 cents, as reported in company documents. Simmons suffers in a weak mattress market

March 1991
Merrill Lynch Capital Partners invests $32 million in the mattress maker after Simmons defaults on one of its many loans. Shares rebound to $1.42

November 1991
Employees file suit against Wesray and others, alleging breach of fiduciary duty and overvaluing the company

DATA: COMPANY REPORTS, BW

CAVE SCHLABOWSKE

Commentary/by Joseph Weber

AN FDA RULE THAT'S POOR SCIENCE AND POOR POLICY

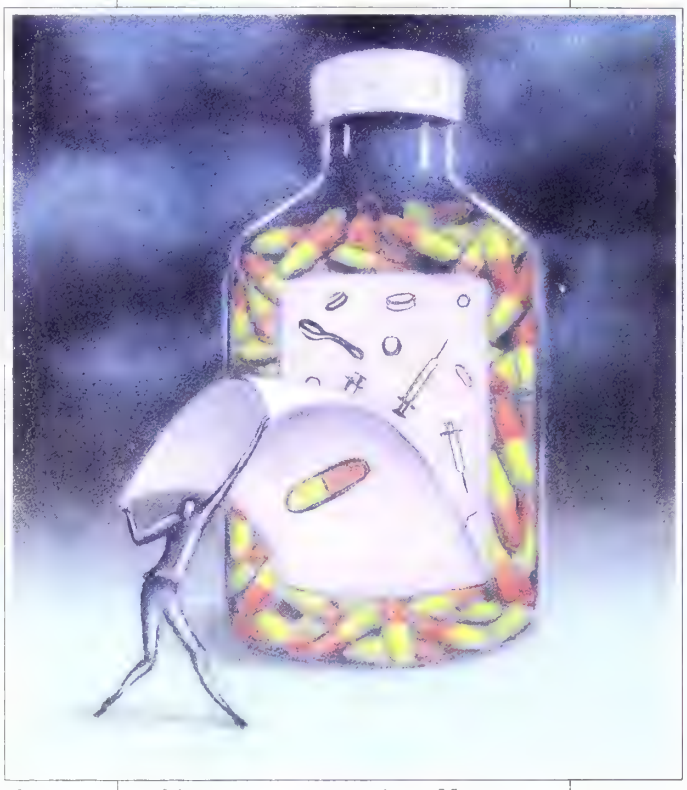
Researchers at Merck & Co. had plenty to crow about this year. In August, scientists at the National Heart, Lung & Blood Institute reported that Vasotec, a Merck hypertension drug, sharply cut the number of cardiovascular deaths and hospitalizations among people suffering from chronic congestive heart failure. Then, in early November, came news from the institute that the drug also curbed heart failure among patients with damaged hearts. Finally, in late November, word leaked out that researchers at the University of Southern California had found that a Merck cholesterol-reducer, Mevacor, halted hardening of the arteries and could even shrink arterial plaque deposits. That could make Mevacor a powerful weapon against heart attacks.

Merck couldn't do any crowing in public, though. No advertising. No press conferences. No publications. And minimal discussion when news reporters called. Even more problematic, the company's sales force couldn't give doctors copies of published studies about the new research or similar earlier studies. In fact, doctors can call the Food & Drug Administration toll-free to inform on companies giving out such information.

NO HINTS. Why the muzzling? Mevacor isn't approved as a heart-attack drug. Vasotec is O. K.'d only for hypertension. And the FDA doesn't let drugmakers so much as hint that their drugs might have potentially beneficial uses unless those uses have gone all the way through the protracted and expensive FDA approval process. Woe to the drugmaker that calls public attention to an unapproved use. The offending company faces discipline and possibly federal prosecution—even if the treatment in question could save thousands of lives.

At least one company has called down the wrath of the FDA and its tough-talking administrator, David A. Kessler. Johnson & Johnson in 1988 staged a press conference to showcase a researcher's work that suggested that Retin-A, the acne medicine, could have some cosmetic use in curbing wrinkles. Sales soared until dermatology patients starting complaining that the stuff irritated and reddened their skin. Demand withered. Now, J&J may be prosecuted for publicizing the research. Even if the company went too far in hyping the data, the marketplace was quick to administer punishment.

Much more than wrinkles are at stake with many of the drugs that are subject to FDA constraints. Many cancer drugs are used routinely for nonapproved treatments. The science is too unsettled and the markets too small for the companies to seek label changes for every potential use of a cancer drug.



And yet, under FDA policy no company may even circulate reprints of cutting-edge research into nonapproved uses—that would constitute promotion in the FDA's eyes. Bristol-Myers Squibb Co., a leader in cancer treatments, last spring stopped publishing a magazine distributed to physicians that routinely discussed nonapproved uses of its drugs. The FDA's crackdown, says Patrick D. Maines, president of the Media Institute, a Washington-based think tank, "is deeply suspect both constitutionally, under the First Amendment, and in terms of the net public benefit."

Then again, shameless drug-company hucksterism is also suspect. But the FDA has no business choking off reliable, well-developed scientific news, even if the messenger is a self-interested drug company. For their part, companies that dispense half-truths or flimsy research to promote their drugs risk their credibility and that of the whole industry. With the health of patients at stake, there's no room for error. Ultimately, all parties will find that fair and balanced information contributes to the best medical practice.

OPEN TALK. To its credit, the FDA is starting to show signs of loosening the drug companies' muzzle. "We are trying very hard to make it easier for companies like Merck," says Ann M. Witt, the FDA's chief drug-advertising enforcer. "Not for them to hold press conferences, but for them to sponsor educational programs at which research can be freely discussed by independent experts."

That idea should be put to the test: Companies that are reluctant to underwrite medical meetings or sponsor impartial speakers at them should clear the meeting's program in advance with the FDA. Maybe then the companies can show that good science doesn't have to conflict with making money. And the agency then, too, could stop looking on every drugmaker's meeting as a one-sided sales session designed to flout agency rules.

What matters most is getting the news out. The stakes are way too high for either drugmakers or regulators to stand in the way of credible scientific research. Stifling information about medicine can only hurt the men, women, and children who need these drugs—sometimes desperately.

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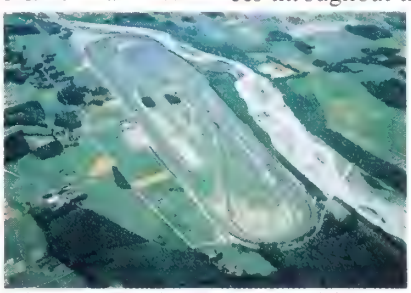

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RETAILING

ON FIFTH AVENUE: AN ATTEMPT TO BROADEN THE CHAIN'S CUSTOMER BASE BACKFIRED

TROUBLE STALKS THE AISLES AT ANN TAYLOR

Resignations, falling sales, jumpy investors, and ugly rumors

Old-timers on Wall Street surely can recall an initial public offering that plunged into crisis quicker. But it'll be a long time before investors forget the speedy descent Ann Taylor Inc. has suffered since its IPO last May (chart). It may be a while, too, before they forgive Merrill Lynch & Co. for underwriting the shares, now worth half the $26 they commanded in the IPO.

Like some freeway accident on a foggy day, the pileup at the upscale retailer of women's clothing makes a gruesome spectacle. Force yourself to look:

In August, Ann Taylor disclosed that same-store sales were tailing off. That alone is pretty ugly for a company that went public just weeks earlier, but there's more. In October, Thomas H. K. Brooks, president and son of Chief Executive Joseph E. Brooks, unexpectedly quit. Weeks later, Joe Brooks himself walked out, just ahead of a report that his son had been detained by the U. S. Customs Service at John F. Kennedy International Airport, allegedly for smuggling a clutch of watches. For good measure, Vice-Chairman Gerald H. Blum up and quit, too, to pursue an acting career.

So who's minding the store? A spokeswoman says a headhunter is searching for a new CEO. Meantime, Ann Taylor is running by committee—a reality that has investors on edge and selling out. "The business has really hit a wall," says Helen Hayes, an analyst at Janus Venture Fund, which bought a big stake in the IPO and recently dumped it at a loss. "The resignation of Joe Brooks couldn't have come at a worse time."

LIKE A WINNER. Neither Brooks is talking. But James J. Burke Jr., chief of Merrill Lynch Capital Partners and an Ann Taylor director, says his firm isn't fretting over its majority stake in the retailer: "We have every confidence in our Ann Taylor investment." Indeed, Merrill's tie to Brooks has long looked like a winner. With Merrill's backing, Joseph Brooks led a $430 million deal for Ann Taylor in 1989. Brooks became chief and named his son president. They drafted a plan to expand Ann Taylor from 177 stores in April, 1991, to 250 by 1993. Thirty-three new stores opened this year, and 42 were to open in 1992. With the expansion on track, Ann Taylor seemed headed for fast growth when it went public in May.

Suddenly last summer, a slew of merchandising blunders hit home. Noting that his core clientele of affluent working women was shrinking, Brooks had decided to appeal to a broader group. Analysts say he cut the quality of some goods and phased out Ann Taylor's relationship with the expensive line of Joan & David shoes.

The plan backfired. For one thing, there already are lots of shops appealing to the broader clientele. For another, Ann Taylor's reliable customers balked. Here's one example: The company had "bought a lot of rayon, and it wasn't a high-quality fabric," says Janet Joseph Kloppenburg, an analyst at Robertson Stephens & Co., a co-underwriter of the IPO. "Customers felt the high prices of the garments weren't warranted."

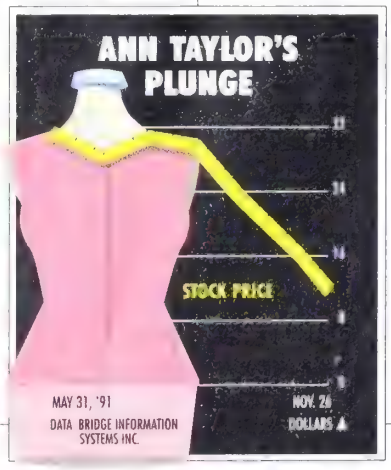
'LESS TRAFFIC.' Or take the move to dump Joan & David. Private-label shoes have fattened company margins. But notes Richard Hastings, a credit analyst at Solo Credit Corp., "the Joan & David exit means less foot traffic in the stores." Although Ann Taylor's sales per square foot have been among the highest in retailing—$740 vs. $450 at The Gap Inc.—volume is off: Same-store sales fell 5.2% in October.

All this might leave an underwriter red-faced, but Merrill is having none of it. "We did everything in terms of doing right by all our constituents, our shareholders and creditors," says Burke. But since Merrill Lynch Capital Partners first invested in the company back in 1989, it picked up its stake, now 56%, at $6.80 a share. So it's still ahead of the game. Says Burke: "There is absolutely no financial impact on Merrill."

The Brookses may not get off so easy. A source at the company confirms that Ann Taylor has hired law firm Skadden Arps, Slate, Meagher & Flom to investigate the Brookses' business practices. For instance, he says, some personal expenses authorized by the younger Brooks may have been put on the retailer's tab. Says this source: "We are still looking into Joe now." Expenses improperly charged to the company, he says, will have to be reimbursed by the Brookses.

And then there are those watches. Customs Service Regional Counsel Melvyn N. Minsky confirms that the feds are weighing a possible civil case against Tom Brooks.

By Laura Zinn, with Michele Galen and Lea Nathans Spiro, in New York



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MEDIA

DID MAXWELL LEAVE A HOUSE OF CARDS?

The mogul appears to have been a master of financial sleight of hand

For a world-class publicity hound, Robert Maxwell certainly kept his personal finances under wraps. The British media baron projected a gilt-edged image: Buzzing to and from his Oxford estate by helicopter and buying and selling companies like chess pieces. In its annual roundup of billionaires last July, *Forbes* estimated Maxwell's net worth at $1.9 billion.

But since the tycoon's mysterious death at sea on Nov. 5, the facade has been crumbling. As his creditors start picking through the Maxwell estate, they're making an unpleasant discovery: Most of Maxwell's wealth was illusory. The 68-year-old mogul had mortgaged nearly every family asset to underwrite his acquisitions.

FRAUD PROBE. To appease his bankers, Maxwell frantically shifted assets and debt from one company to another. Creditors had recently been pressing Maxwell. In one case, he failed to deliver the collateral for a loan that he had promised to deliver. Several of his loans are in default, and one is under investigation by Britain's Serious Fraud Office.

Now, to prevent the empire from unraveling, Maxwell's sons Kevin and Ian are scrambling to convince more than 25 banks that their father's borrowing spree has not left them bankrupt. On Nov. 25, they gained a bit of breathing room. At a 2½-hour meeting in London, accounting firm Coopers & Lybrand and longtime Maxwell adviser Bankers Trust Co. presented the banks with a report that estimated Maxwell family assets to be $350 million more than its liabilities. The banks, which include Britain's National Westminster PLC and Lloyds Bank PLC, agreed to hold off any foreclosure action until Dec. 20. They'll also prepare a rescue plan for Maxwell's family assets within 10 days.

The big crunch for Kevin and Ian is $1.5 billion worth of debt that their father ran up to buy everything from British soccer teams to newspapers in East Germany and Israel. Although these and other properties are owned by private Maxwell companies, many of the loans were secured by shares in his publicly traded flagship, Maxwell Communication Corp. (MCC). The company, which owns book publisher Macmillan Inc. and the Official Airlines Guides Inc., also lumbers under $2.3 billion in debt.

Fears that MCC would have trouble meeting its repayment schedule had been eroding the company's share price even before Maxwell died (chart). The stock fell from $4.28 in early May to $2.18 the day Maxwell vanished off his 180-foot motor yacht. Then it plunged as low as 63¢. The scary part for creditors: Kevin Maxwell recently disclosed that more than four-fifths of the family's 68% MCC stake was pledged as collateral for loans. In early May, that stake was worth $1.9 billion. But the shares now are worth about $440 million—not sufficient collateral to cover the private debt.

So what happens now? The Maxwells and most of their bankers hope to agree on a workout of the debt. Such an arrangement would be similar to the complex pact that saved media baron Rupert Murdoch when he came close to defaulting on his $8.2 billion debt last year. "You don't want one bank pulling the plug, threatening a landslide," says one banker. But in return, the Maxwells would have to sell many of their assets. The yacht that took Robert Maxwell on his fateful cruise would surely go, as would his private jet.

FANCY FOOTWORK. Less certain is the future of such money-losing papers as the New York *Daily News* and *The European*. Kevin and Ian insist they will keep them. The family also hopes to retain control of its other major holding, Mirror Group Newspapers PLC, which publishes Britain's *Daily Mirror*. Its 51% stake is worth $450 million. But as with MCC, Maxwell mortgaged many of these shares to secure loans.

Maxwell's sons are scrambling to convince more than 25 banks that their empire is not bankrupt

Also unclear is the future of MCC: Rumors have flown in the City of London that it, too, might have to be sold. But Kevin Maxwell has said that asset sales have already raised most of the $750 million due in MCC's next debt payment in October, 1992. These included the Nov. 7 sale of a majority stake in Berlitz International Inc. to a Japanese publishing company. Still, he admits that the balance of MCC debt will have to be restructured as well, since MCC won't be able to raise an additional $1.26 billion by October, 1994.

Things never came to such a pass while Maxwell was alive, but only because he used some fancy footwork to stay ahead of the bankers. One case in point: a $104 million loan from Swiss Bank Corp. that is now under investigation by Britain's fraud office.

Maxwell borrowed the money last August to bid for the entire portfolio of a British investment fund called First To-

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kyo Index Trust PLC. Maxwell, who was managing the fund through a subsidiary, opted to bid for the portfolio after the fund's directors discovered he had lent 84% of its assets to another Maxwell company without their consent. In an offering document for First Tokyo, Maxwell acknowledged that "the manner and terms of the securities lending program should have been approved by a resolution of the board."

Swiss Bank was to get the entire portfolio as collateral for the loan. But when handover time came in October, Maxwell didn't deliver. "Not a single share turned up," says Timothy Shepheard-Walwyn, a Swiss Bank official in London. After Maxwell died, Swiss Bank was told by Maxwell executives that all the shares had been sold. The bank refused to accept less-secure collateral in other Maxwell properties and turned the matter over to British police. Swiss Bank is now also pressing for preferred treatment over other creditors.

The Swiss Bank incident suggests Maxwell was having trouble keeping up his adroit juggling of debts shortly before his death. Another sign was his recent falling out with Goldman, Sachs & Co.: In August, the investment bank revealed it was holding about $190 million in MCC and Mirror Group shares as collateral for a loan it had made to Maxwell. A source close to Goldman says the firm later became concerned about the eroding share price of both companies. When it pressed Maxwell to repay the loan, he stalled. So to show Maxwell it meant business, Goldman sold 2.2 million MCC shares just days before his death.

With Goldman and others calling an end to Maxwell's legerdemain, his freedom to act as a big-spending billionaire was already getting hedged in. Now, his heirs are using all their skills to emerge from the mess as mere millionaires.

By Mark Maremont in London

MARKETING

'HONEY, LET'S TAPE SOME COMMERCIALS FOR THE WEEKEND'

Henry Yuen has a new brainstorm—and Madison Avenue is all ears

First, Henry C. Yuen did what skeptics said was impossible: He persuaded newspapers to pay for all those tiny numbers they now run in the TV listings, the ones that program VCRs to automatically record shows. Now, he's going after far bigger game by trying to get TV advertisers to do the same.

Yuen is the genius behind VCR Plus, that simple $60 gadget that signals almost any VCR to turn on and record at the right time after the viewer punches in a code number from the TV listings (BW—Jan. 14). The way Yuen figures, advertisers could use the same scheme to deliver information to interested consumers. "We're just extending the choice from what program they want to watch to what commercial they want to watch," says Yuen, CEO of Gemstar Development Corp.

BIG SAVINGS. Right now, the idea is just a concept, but he has set up a sister company, iPlus Inc., and hired ad agency veteran James K. Agnew to run it. Executive Vice-President Agnew most recently headed J. Walter Thompson/West and was president of McCann-Erickson USA. "You already see ads for cars and cruise lines and tourist destinations running 800 numbers so prospects can get a videotape," he says. "In the future, we'd hope that the VCR Plus-Code would be listed."

The code would trigger VCRs to tape a 10- to 30-minute commercial aired on a little-used cable channel in the wee hours. Agnew figures that as the number of VCR Plus users grows, the iPlus system will be able to deliver such a "video brochure" to consumers at a cost to advertisers as low as $1 to $2. Companies that now mail out videocassettes spend as much as $10 each, plus production costs. Blank tape, dubbing, and packaging alone cost them around $2.

As with current video brochures, the consumer pays nothing. The cable station, meanwhile, could sell time that would otherwise go unused. And iPlus would collect its cut from the agency that placed the ad that got the consumer taping in the first place.

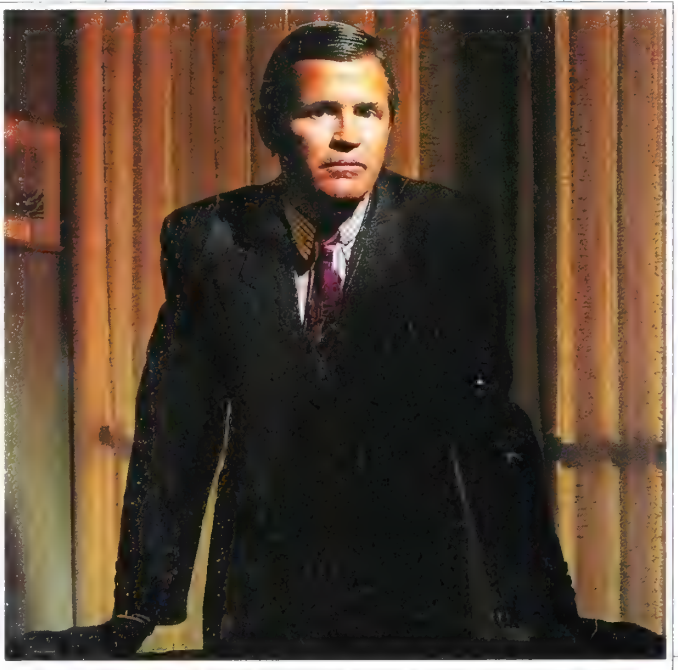
The prospect of big savings has grabbed the advertising community's attention. "If TV advertising is fragmenting like we think it is, then we have to find new ways to get our message into the home," says Vic Olesen, president of the Los Angeles ad agency that bears his name. Olesen ran a campaign earlier this year for Chevrolet, mailing 200,000 videotapes to Californians to drum up interest in the Caprice sedan. "That was just potluck, but what VCR Plus has is really remarkable," he says. "You would get highly qualified prospects, because they all asked for it."

Adds Richard B. Edler, managing director of Foote, Cone & Belding/Los Angeles: "Because they're already in the home, VCR Plus could become the premier direct marketers in the country."

TEST TARGETS. Agnew plans to start with three categories when testing begins next spring: automobiles, tourism, and movies. The three already use extensive video marketing, he points out, either through direct mail or, in the case of movie studios, by running trailers in theaters and on videos.

Now, all he has to do is to persuade prospects to run them on TV—and rent a Plus-Code from iPlus. That will mean still more revenues for VCR Plus, which, counting license fees from newspapers, royalties from VCR makers, and sales of the gadget itself, will do close to $80 million in business this year, its first. "What we've come up with is the poor man's interactive TV," says Yuen, who still holds down a job at TRW Inc.'s Space & Technology Group. But it's a poor man's toy that's making him rich.

By Larry Armstrong in Los Angeles



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In Business This Week

EDITED BY HARRIS COLLINGWOOD

MONEY TALKS

What's the best way to encourage quality? Towers Perrin, the compensation consultants, recently asked 500 U.S. companies whether they provide top performers with recognition, such as cash and stock. Then Towers Perrin asked the companies whether the plans help improve quality. The results:

THE TORCH PASSES AT FIAT

▸ The Agnellis, Europe's most powerful industrial dynasty, are preparing for change at the top. Giovanni Agnelli, the 70-year-old head of the family, announced on Nov. 24 that his brother Umberto, 57, would succeed him as Fiat chairman. No date was set, but under the bylaws of Giovanni Agnelli & Co., the family holding company, the elder Agnelli must retire when he turns 75 in 1995. Says a Fiat insider: "Nothing excludes transferring power before 1995."

Umberto has overseen large Agnelli investments in French food giant BSN, Club Mediterranée, and Meridiana, the largest private airline in Southern Europe. With Fiat profits slumping, such holdings are increasingly important in the family portfolio.

COORS BREWS BIG PLANS FOR KOREA

▸ Coors is going where the growth is. With Korean beer sales expanding 15% a year, compared with a puny 2% in the U.S., Coors Brewing is forming a joint venture with Jinro, Korea's largest producer of alcoholic beverages, to build a 1.8 million-barrel brewery in Seoul to produce Coors beer. Coors is aiming to capture 20% of the Korean market before long.

The plant, which is supposed to come on line in 1995, will be Coors' first outside the U.S. It's part of an international expansion program for America's No. 3 brewer, which wants to be in 20 markets outside the U.S. by 1995. Coors is now for sale in seven countries outside the states.

CHASING DIRTY MONEY TO THE CITY OF ANGELS

▸ Calling Los Angeles "the center of drug-money laundering in the United States," federal authorities in five cities charged 50 people with illegally moving more than $500 million in drug profits through a vast network of banks and precious-metals companies centered on the West Coast. FBI officials say some of the people arrested are connected to the Patriarca organized-crime family.

According to the FBI, the suspects would disguise the ill-gotten nature of their money by purchasing jewelry importers or export-import companies in Los Angeles. Under the guise of legitimate financial transactions, the suspects would then wire drug money through the companies' accounts to banks in Rhode Island, South America, Switzerland, and elsewhere.

DAYS OF WHINE AND ROSES

These are thorny times for organizers of the 103rd annual Rose Bowl and its accompanying parade. It all started when a descendant of Christopher Columbus was named grand marshal of the Jan. 1 extravaganza. After groups representing Native Americans protested, a Northern Cheyenne member of the House, Ben Nighthorse Campbell (D-Colo.), was named co-grand marshal. That still may not forestall a demonstration.

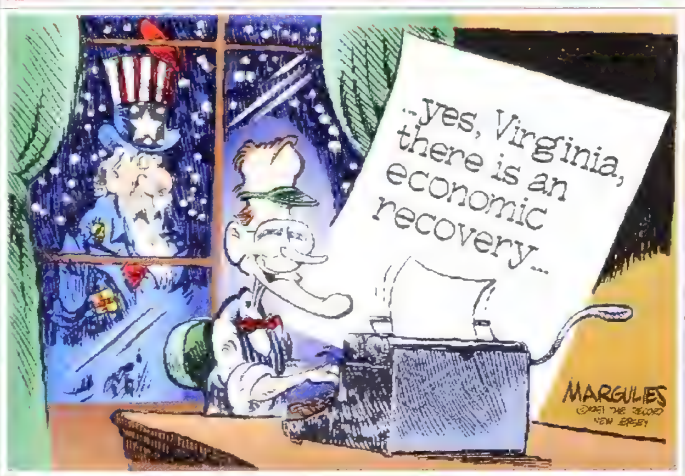
Then, the Los Angeles County Sheriff's department threatened that it wouldn't supply its usual security forces for the event. The reason: The Pasadena City Council insisted that the 763-member security team include no members of a local white-supremacist group. "The personnel of my department have been grievously and unfairly characterized," fumed Sheriff Sherman Block, prompting the council to apologize. What's next? Animal-rights groups protesting the use of pigskins?

CLOAK-AND-DAGGER IN ROCHESTER, N.Y.

▸ It was a case of corporate espionage that might make a decent B-movie. Two spies hired by a major corporation botch a job breaking into the enemy's camp. But don't expect to see it in theaters owned by National Amusements, which owns 700 movie screens, as well as cable TV's Showtime and The Movie Channel. Why? National Amusements hired the spies.

On Nov. 15, two men appeared in the lobby of a Rochester (N.Y.) office building after work hours and talked their way into the offices of a law firm representing a community group opposed to the building of a National Amusements theater in a nearby suburb. Soon after, a custodian saw the men, Ralph Howe and Sean Cole, going through the firm's files. They were arrested the next day, and both have pleaded not guilty.

While National admits hiring the men, it denies authorizing any illegal activity. But it said in a press release: "If the opposition is significantly funded by one or more competing exhibitors . . . we are entitled to know."



HOW A TYPO TOPPLED THE PHONE NETWORKS

▸ Talk about expensive typographical errors. DSC Communications in Plano, Tex., has confirmed that a single mistyped character in some software—a "6," to be exact—helped trigger extensive local phone outages last summer in the Washington, Pittsburgh, and Los Angeles areas. The "6" was typed in place of a "D" in software that helps set up phone calls, DSC confirmed.

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IBM

Why explorers are willing to stake their lives on a Rolex.

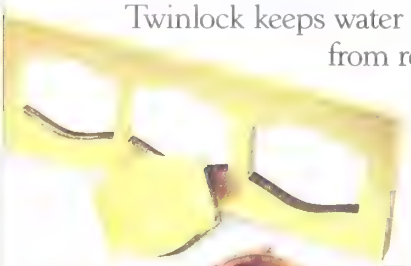
"If my Rolex hadn't been reliable, I'd be lost. It's as simple as that." So said explorer Robert Swan about the timepiece that helped him navigate to the South Pole. As Swan's fellow-adventurer Janusz Kurbiel notes, "When you can't rely on external time checks, a watch becomes one of the basic instruments of survival."

The Twinlock winding crown protects movement from the elements

Part of what makes a Rolex Oyster so dependable is the design of its rugged case, which is hewn from a solid block of metal, using up to sixty tons of pressure.

The shell that results is the ideal protection for the intricate Rolex movement, a mechanism so finely honed, it takes Rolex expert craftsmen a year to create one.

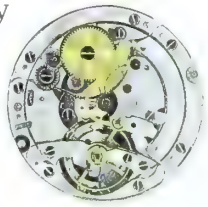
The movement is further protected by the Twinlock winding crown. Designed according to the same principle as a submarine hatch, the Twinlock keeps water and other elements from reaching the movement.



It takes more than 150 operation to create an Oyster case

On the Submariner and Sea-Dweller diving models, the Twinlock is replaced by a Triplock crown designed to keep the watch pressure-proof to depths of 1,000 and 4,000 feet respectively.

As each timepiece is being assembled, it is subjected to a comprehensive series of tests. To ensure that the movement performs mechanically, it is examined by expert watchmakers aided by computers, lasers, and electron microscopes. And once the Rolex movement is finally assembled and placed in its Oyster case, it is tested anew—this time for reliability and resistance to water pressure.



The Rolex Oyster Perpetual movement contains more than 220 components

The extraordinary process that goes into making a Rolex helps explain why it has accompanied explorers to the heights of Everest and into the frigid waters of the Arctic. While there are many timepieces people count on for the time, there is one they trust with their lives. Rolex.

Rolex Oyster Perpetual Date GMT Master in stainless steel with matching Oyster bracelet

ROLEX

Write for brochure: Rolex Watch U.S.A., Inc., Dept. 514, Rolex Building, 665 Fifth Avenue, New York, New York 10022-5383

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EDITED BY STEPHEN H. WILDSTROM

A PRESIDENTIAL CAMPAIGN IN SEARCH OF A RUDDER

When Lee Atwater died last March, all of political Washington knew that George Bush would miss the architect of his 1988 electoral triumph once the '92 campaign got rolling. But until the President's polls nose-dived this fall, no one realized just how keenly the loss would be felt.

Atwater earned a search-and-destroy reputation in the '88 campaign by making furloughed prisoner Willie Horton a household name and ridiculing Michael S. Dukakis for being soft on the Pledge of Allegiance. But Atwater's real genius was his feel for the pulse of the middle class. He helped the patrician Bush harness the seething resentments of average Americans.

That instinct has been sorely lacking in recent White House maneuvers. Hurting workers are not assuaged by Bush's assurances that the economy is mending, that a cut in capital-gains taxes will be good for them, and that he'll tackle the problem of inadequate medical insurance when he's good and ready.

'NOBODY IN CHARGE.' Bush has delayed putting the White House into campaign mode for two reasons. He thinks he'll benefit from staying "Presidential" for as long as possible. And he has been unwilling to resolve a bitter internal struggle over who will be top dog in the '92 campaign—White House Chief of Staff John H. Sununu or a longtime adviser such as Robert M. Teeter. Despite Sununu's many gaffes, Bush appears to have no immediate plans to ditch the combative staff chief—or to freeze him out of campaign decision-making.

SUNUNU: MALADROIT ADVISER?

Until Bush stops dithering—and finds a new Atwater—the problems will persist. "They have no plan, and nobody in charge," says top GOP strategist Stuart Spencer. Normally, Bush intimate James A. Baker III would step in to take command. But the peripatetic Secretary of State is working full-time on the Middle East peace conference. In Baker's absence, such veteran GOP pols as consultant Charles Black and former Reagan Staff Chief Kenneth M. Duberstein could be tapped for top roles in the reelection effort.

But first, Bush must free himself from the iron grip of his politically maladroit advisers, including Sununu, Budget Director Richard G. Darman, and Treasury Secretary Nicholas F. Brady. Murmuring that "good policy is good politics," they predict that the economy will soon snap back, allowing the President to resume his glide to reelection.

Such confidence is shared by few in GOP ranks. Republicans are terrified by polls showing Bush's approval rating down to 51% and nervous over growing signs of a GOP bloodbath in the '92 Senate races. Some even worry that the President's passivity indicates lack of interest in a second-term domestic program. In fact, morale is so low in the White House that James P. Pinkerton, who has pushed the concept of empowering the poor as a substitute for traditional Democratic social programs, is thinking of quitting as director of policy planning. Pinkerton has been frustrated to see many of his ideas picked up not by Bush but by Democratic contender Arkansas Governor Bill Clinton (page 60).

"The President didn't expect to be in this spot," concedes one close adviser. Now, Bush is pinning his turnaround on his January State of the Union Address. He's promising a bold offensive that will, as one intimate puts it, "show the American people the President is as interested in bringing change at home as he has been to the world."

But, hamstrung by the deficit, Bush is unlikely to offer much more than rhetoric. And if he offers merely a slick public relations effort, the Democrats will keep pounding him with charges of domestic neglect. So finding a street fighter like Atwater is all the more important. As former Reagan political director Mitchell E. Daniels Jr. says: "I don't care who he picks, but the President has to pick somebody real soon."

By Douglas Harbrecht, with Paula Dwyer

CAPITAL WRAPUP

HEALTH CARE

A series of hearings by Senate Majority Leader George J. Mitchell (D-Me.) is more than it seems. Mitchell will hit five cities during the week of Dec. 9-13, ostensibly to solicit views on how the government can ease the health care crisis. But it so happens that the Democratic senators who will chair individual sessions—Wyche Fowler Jr. of Georgia, John Glenn of Ohio, Bob Graham of Florida, and Tim Wirth of Colorado—are up for reelection next year. Each has a fund-raising event scheduled to coincide with the hearing he'll run. Mitchell says the fund-raisers were planned after the hearings and that no health care groups are being asked for contributions. Still, the Democratic Senatorial Campaign Committee is defraying Mitchell's travel costs.

REGULATORS

Food & Drug Administration chief David Kessler's reviews on Capitol Hill have turned mixed. He wins wide praise in Congress for revitalizing the agency. But some lawmakers are worried by reports that Kessler has stirred up resentment within the FDA by replacing senior managers with his own people. "Management-wise, I think he's off to a bad start," says a worried Hill staffer.

CONTENDERS

The first test of Democratic Presidential contenders looms not in Iowa but in a Dec. 15 straw vote at the Florida state Democratic convention. The victory could allow one of the six candidates to break out of the pack—and right now, Arkansas Governor Bill Clinton may have the edge. He has the support of four important county chairmen and of Lieutenant Governor Buddy MacKay. But don't count out Iowa Senator Tom Harkin, who has strong labor backing, or Senator Bob Kerrey of Nebraska, who has picked up key support in the Tampa Bay area. Both are working the Sunshine State hard.

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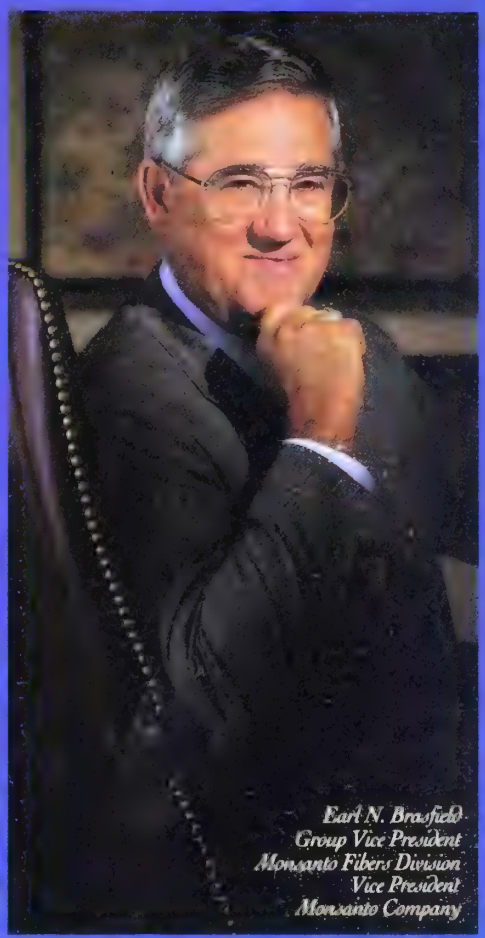

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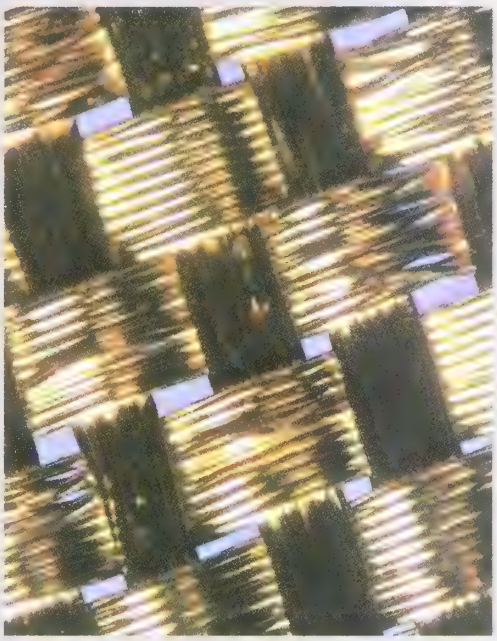

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'THE CARNIVAL IS OVER'

Can Europe's stodgy airlines weather deregulation and tough new rivals from the U.S. and Asia?

It's 3 a.m. in Paris, and Air France Chairman Bernard Attali is wide awake, staring at a home-computer screen. Attali, a night owl who rarely sleeps more than three or four hours, has worked until midnight. Now, with a few moments to relax, he's indulging his passion for chess, playing against a computerized version of world champion Garri Kasparov. Pondering his next move in these early-morning hours, however, Attali surely has much more than chess on his mind.

That's because Air France and Europe's other airlines are facing the stormiest period of their postwar history. Thirteen years after deregulators turned the U.S. airline industry topsy-turvy, Old World carriers are bracing for a similar jolt. As they head into the fateful year 1992, European Community planners are attempting to knock down borders, promote freer competition, and push protected airlines out of their cozy, nationalistic nests. Simultaneously, Europe's airlines face an unprecedented onslaught from America's mightiest carriers—American, United, and Delta. Asian airlines, too, are swooping in.

The inefficient Europeans risk losing out. While deregulation was whipping U.S. airlines into fighting trim, monopolistic routes and government coddling kept most European carriers fat and stodgy. Today, the pampered airlines badly need the discipline of greater competition. Their ability to slim down—and team up—will determine whether such proud old names as Alitalia, SAS, and Air France can maintain a credible presence against their competitors. At the moment, nearly all are losing market share and losing money (chart).

The Europeans aren't likely to adopt the winner-take-all kind of deregulation that the Americans embraced in a burst of free-market fervor. Europe's governments, still sorting out how much they'll give up to pan-European control, are opening the skies to competition in gradual steps. Fares will fall, but not in the wholesale frenzy that hit the U.S. a decade ago. And there are still competing visions of what Europe's deregulation will ultimately look like.

MERGER WAVE. But whether it's France, advocating a go-slow liberalization even as it funnels subsidies to Air France, or Britain, with its faith in laissez-faire, most Europeans agree that "we're at the beginning of a vast restructuring movement," as Attali says. Of Europe's two dozen major airlines, the majority will disappear, says Giovanni Bisagnani, chief executive of Italy's Alitalia. As he told senior managers recently: "Gentlemen, the carnival is over."

Already, a merger-and-alliance wave building as worried European airline scramble to make their strategic move Air France, which last year absorbed i major French rivals, now is eyeing stake in Sabena Belgian World Airline Germany's Lufthansa is talking wit USAir and Japan Air Lines about tyin its routes to theirs with marketin agreements. Alitalia has already inke similar accords with USAir and Iberia A Lines.

Giant British Airways PLC, probabl Europe's most competitive airline, ha much grander moves in mind. It's di cussing tight links with KLM Roya Dutch Airlines, a sort of near-merge Such a deal would give Britain's priva tized carrier access to both KLM's hub i Amsterdam and its 20% stake in Amer ca's Northwest Airlines Inc. The resul ing powerhouse would vault past A France as Europe's biggest carrier.

With a few exceptions—British Ai ways is one—Europea airlines are state-controlle symbols of national prid When passengers don't fi their coffers, taxpayers d This year, Belgium promising $270 million t state-owned Sabena. De spite foes in Brussels, A France won EC approval i November to haul awa $370 million from the pu lic trough. European go ernments also tolerate ca tel-style fares on suc routes as Paris-Brussels. mere 155-mile flight tha costs $465 round-trip.

As European leaders s down this month in th Netherlands to begin th next round in the quarre some process of forging unified Europe (page 56 it's easy to see how airlin deregulation could get ta gled in conflicting nation priorities. Protectionist are fighting free-marke

KEY BATTLERS FOR EUROPE'S SKIES

FISCAL 1990 RESULTS: FISCAL YEARS END 12/31/90	GLOBAL REVENUES BILLIONS OF DOLLARS	NET EARNINGS MILLIONS OF DOLLARS	GLOBAL TRAFFIC PAYING PASSENGER-MILES, BILLIONS
AMERICAN AIRLINES	$11.7	–$39.6	77
Developed many routes to the Continent. Bought TWA's lucrative routes to London. Huge, wealthy, and aggressive			
UNITED	$11.0	$94.5	76
Building hubs in London and Paris, after buying Pan Am's routes. Major powerhouse			
AIR FRANCE	$10.5	–$132.0	36
Trying to cut costs, but government and unions balk. Bought its two big French competitors, likely to buy into Sabena soon			
DELTA*	$9.2	–$324.4	62
Building hub in Frankfurt with purchase of Pan Am's extensive rights to Europe, Eastern Europe, the Middle East, and Africa			
LUFTHANSA	$9.0	$9.0	32
Slowly going private. High costs, but has strong domestic market plus Eastern Europe. Possible alliances: Air France, Japan Air Lines, USAir			
BRITISH AIRWAYS**	$8.8	$170.0	40
Privatized and efficient, eager to spread wings. But vulnerable to U.S. carriers. Talking possible merger with KLM and links with Northwest			

*FISCAL YEAR ENDS 6/30/91 **FISCAL YEAR ENDS 3/31/91

DATA *AIRLINE BUSINESS* COMPANY REPORTS

ERGER-MINDED: BRITISH AIRWAYS IS EYEING A DEAL WITH KLM THAT WOULD GIVE IT A MUCH-NEEDED HUB ON THE CONTINENT

s on a host of fronts, from antitrust to vernment purchasing. Even the most o-competition airline chiefs wonder nether it's fair to push open skies as ng as tax levels, labor costs, and social nefits differ among countries. Eu-pe's skies are fast becoming a key test just how unified the Europeans want eir vaunted single market to be.

Last summer, EC officials wrote tough w rules that, pending approval next ring, will significantly change Eu-pe's airways. By Jan. 1, 1993, any EC rline will be free to fly any internation-route between two EC countries. On e key issue of fares, an airline will be le to charge whatever it wants, unless e governments at both ends of the ute say no. Currently, one side alone n kill a fare. By 1996, no government ll have a say in fare-setting. And cabo-ge rights—carrying passengers within single country—will expand.

LD STRATEGY. Although opponents ay manage to slow the timetable, even ey admit open European skies are ming. A major goal is to strengthen efficient carriers—something they bad-need. The winners of U. S. deregula-n—Delta, American, and United—are ickly replacing their weak sisters Pan n and TWA, which gave the Europeans ly modest competition. Stalled by slow growth at home, the newcomers are lured by the promise of 1992 and by the need to strengthen a key link in their global route systems.

With great fanfare last month, Delta launched a new Frankfurt hub and plans to fly to 27 European cities. By next summer, Delta will boost transatlantic service by 35%, to an impressive 266 round-trips a week. United is planning a Paris hub, and American is tackling the French and British markets. In 1985, two U. S. airlines flew to Paris. Now, Attali competes with eight. As a result, Air France's market share on the North Atlantic has plunged from 48% to 31%.

The Americans have one huge advantage. Air treaties signed after World War II let them fly between many European cities: Paris to London and Brussels to Munich, for example. Generally, they can't haul passengers within a single country. But their border-hopping privileges mean they can build feeder networks inside Europe, while European airlines have no such rights within the U. S. Early next year, United Airlines Inc. will fly traffic into a new Paris hub from five cities on the Continent—for starters. U. S. carriers may also pull European regional airlines into their orbits. Aero Lloyd, Germany's biggest charter airline, is offering itself to an unnamed U. S. carrier as a "Trojan horse" inside a deregulated Europe, says Aero Lloyd official Ronald Schmidt.

The Europeans are crying foul about what they regard as unequal treaties. "The Europeans have no rights at all in the U. S.," complains Karel Van Miert, transport commissioner of the European Community and deregulation's godfather. In the hands of Pan American World Airways Inc. and Trans World Airlines Inc., many U. S. rights lay dormant. Now, stronger Americans are activating them. That could touch off a political air war, with Europe threatening to revoke its old treaties unless the U. S. opens up to the Europeans.

For now, many European officials—such as the Germans—are more focused on keeping the Americans out. The reason is simple: Like their U. S. rivals in this recession year, most Old World airlines are losing money and will lose more. As competition grows, marketing costs will rise. Frequent-flier programs, unknown in Europe, are arriving and will become common. And Europe's sky-high air fares are gradually going to fall as government protections are lifted. "Profits will be under great pressure, no doubt about it," says KLM Chairman Pieter Bouw. This year's profits are suffering from weak traffic during the Per-

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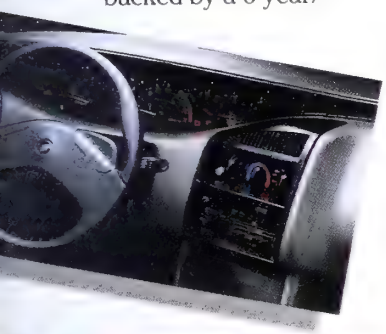

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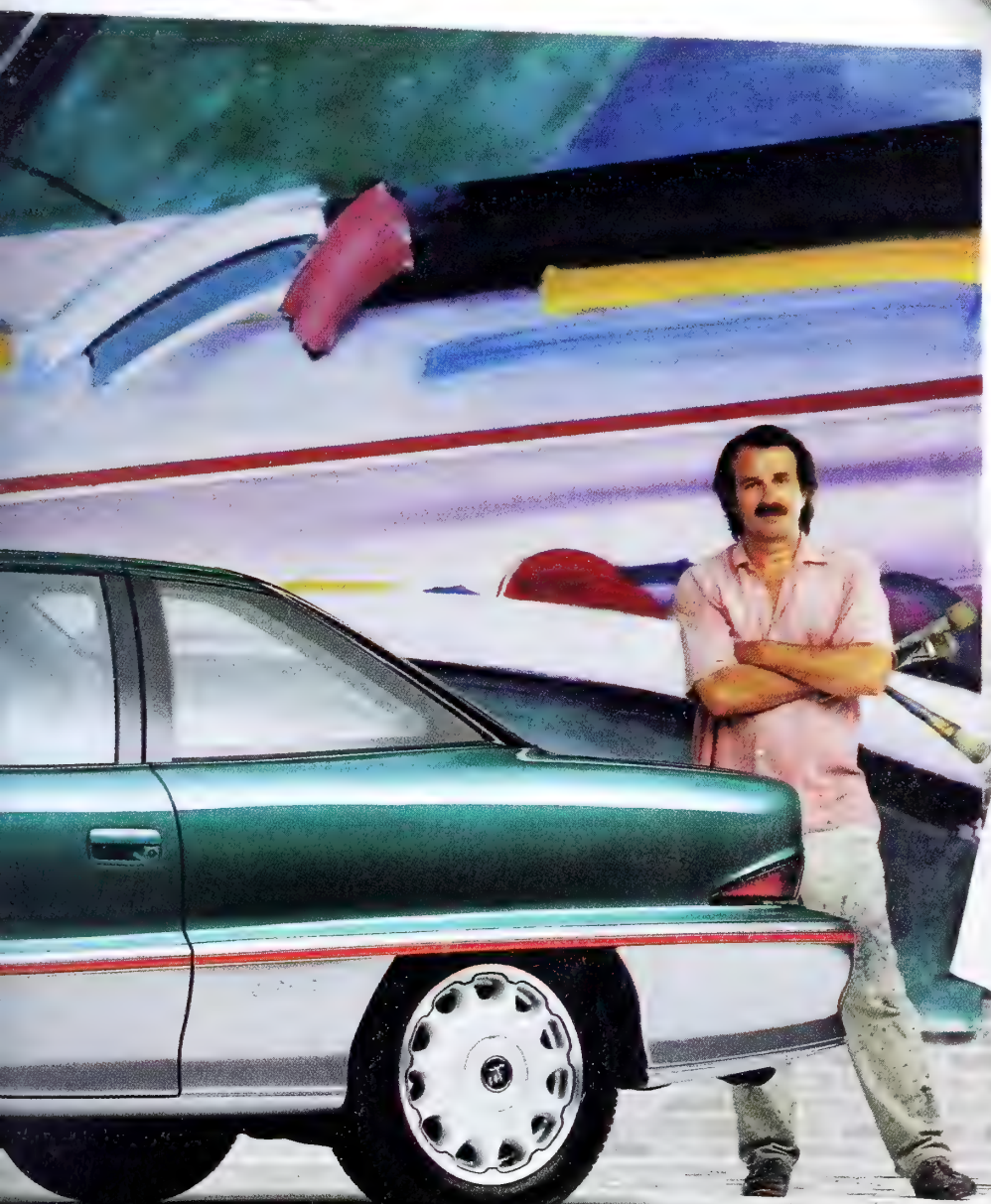

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sian Gulf crisis and the economic downturn that followed.

Such problems weigh heavily on Air France's night-owl chairman. His experience shows how arduous it is pushing a state-owned carrier out of the nest. Excess employees, high wages, and aging planes all help bloat Air France's costs. Precise comparisons are tough, but under one measure—operating expenses per available seat-mile—Air France shells out 20.8¢, vs. 14.4¢ for BA, Europe's cost leader. The big three U.S. carriers pay less than 10¢—although that will rise in Europe because of stiff landing fees and infrastructure costs.

SLOW GOING. So far, the 48-year-old Attali is tiptoeing toward a modest restructuring that would cut staff by 5% over the next two years. He has placed major airplane orders to overcome shortages of planes. He is hacking away at a managerial maze of up to 18 decision-making levels. And he is improving Air France's in-flight service, which even the airline's executives admit has slipped.

Multiply Attali's problems by two dozen airlines, and you have an idea of Europe's challenge as deregulation looms. If U.S. experience is any guide, Europe's airports will be littered with losers. Even the U.S. newcomers, today flying so boldly into Europe, may find their new routes bumpier than expected. British Airways could give them serious competition. A rejuvenated Air France might, too. It has vast routes and an image of French luxury to exploit: It's the world's largest buyer of champagne. But the survivors will emerge far stronger. "We'll have turmoil for four or five years," predicts deregulator Van Miert. "But the dynamic airlines will take advantage of it and grow."

Revitalizing Europe's airline industry will be a grueling process, in part because of Europe's own ambivalence about liberalization. On the one hand, the EC favors greater competition to lower fares and give travelers more choice. But that clashes with Europe's need to build financially stronger carriers that can face the onslaught from abroad.

As the Europeans attempt to walk a fine middle line, free-marketers are growing impatient. "Things are moving much too slowly," complains Robert Ayling, BA's director of marketing and operations. He is resigned to Europe taking far longer than the U.S. before its airlines hit the crosswinds of competition. Still, that day is coming. And it will bring heavy shock waves as Europe struggles to put aside national prestige for more efficient skies.

By Stewart Toy in Paris, with Mark Maremont in London, John Rossant in Rome, and bureau reports

JAPAN

WHY SONY MUSIC HIT SOUR NOTES IN TOKYO

IPOs are hurting—and investors are jittery over the parent's expansion

The $923 million initial public offering by Sony Music Entertainment Inc. ought to have been an attractive deal for investors. The country's top distributor of Japanese music software has an unrivaled stable of Japanese pop artists, not to mention Michael Jackson. An industry leader, the unit of electronics giant Sony Corp. has been a pioneer in such lucrative fields as compact-disk stamping and sales. Its healthy profit margins are above 15%.

But when trading in the newly issued shares opened on Nov. 22, the thud could be heard around the world. Hoping to cash in on an anticipated early rise in the share price, thousands of investors flooded the market with sell orders. At market close, they were still waiting, despite their offers to sell at a 16% discount to the offering price. The poor response reflects Japan's ailing stock market and the concern about Sony's flagging performance. Beset by angry investors, company officials offered profuse apologies. "We're very sorry," says Tadaki Abe, manager of general administration at Sony Music.

JACKSON: IN SONY'S POP STABLE

STRETCHED THIN. The ill-fated offering thickens the gloom that already surrounds the parent company. Profits are plunging, some key markets are saturated or in recession, and high interest rates have axed capital-spending plans. Extensive investments in Hollywood and forays into high-definition television are soaking up oceans of cash.

Just days before trading in the new shares opened on the Tokyo Stock Exchange, Sony predicted a 19% drop in consolidated net profits for the fiscal year ending next March. It also confirmed plans to cut $77 million from this year's $3.5 billion capital-spending budget and slashed an additional $690 million from the 1992 allotment.

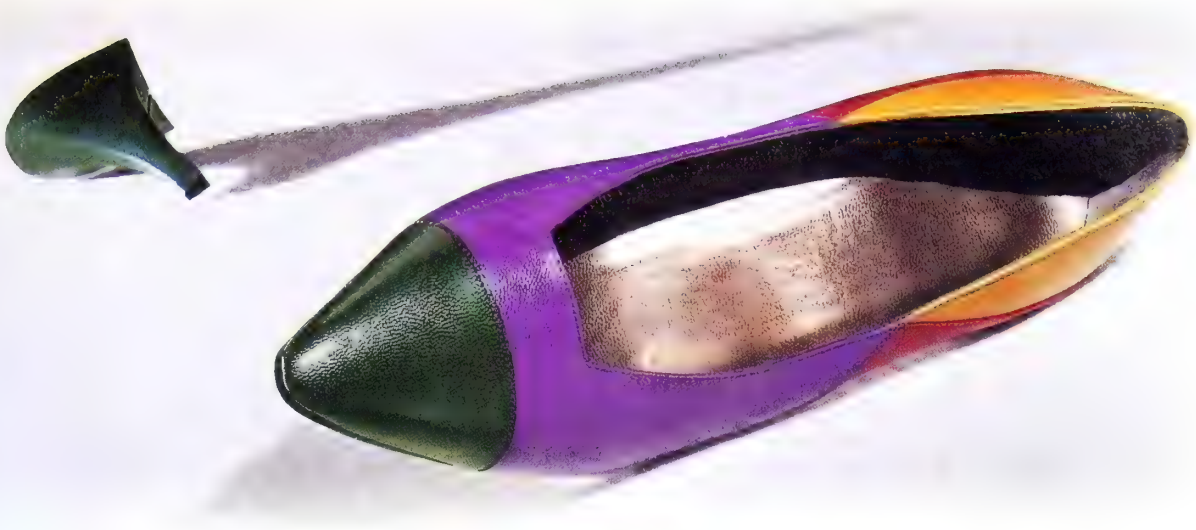
The cutbacks make stock analysts worry that Sony may be stretched too thin. To stay ahead of rivals Matsushita, Toshiba, and Hitachi in the fast-moving consumer-electronics business, Sony must keep up investments both in finished products and in components such as semiconductors and color displays.

With less operating income, Sony will be obliged to go back to the markets. The company is already reeling under an accumulated $13 billion in debt, a big chunk of it from its 1989 purchase of Columbia Pictures Entertainment Inc. But after the recent offering, says UBS Phillips & Drew market strategist Craig O. Chudler, "investors are not going to forget what Sony has done."

The dimmer prospects for raising capital could damage Sony's celebrated capacity for churning out innovative products. Next summer, for example, Sony is due to launch a miniature compact-disk player called a "minidisk" that makes digital music recordings and also plays special prerecorded disks, most of which will be supplied by Sony Music. But analysts say the botched stock listing could hurt the product's launch.

Still, Sony has survived serious bumps in the past, such as its Betamax VCRs, which became outmoded. What it can't tolerate for long is a slump in America and Europe. This year, the protracted recession drove the yen up against other currencies, socking Sony with huge exchange-rate losses. Roughly 70% of Sony's $31 billion in annual sales are overseas. A 7% appreciation of the yen against the dollar was enough to knock $2.3 billion off the company's consolidated sales this year, estimates Yoshihide Kondo, an analyst at Daiwa Securities. At the same time, Sony stock has been heading south generally, to about $34 a share, from a high of about $55 in 1989. The Nov. 22 debacle suggests that Sony faces a long, tough fight to win back investor confidence.

By Neil Gross and Ted Holden in Tokyo



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A EUROPEAN GERMANY OR A GERMAN EUROPE?

The last big event held in the small Dutch town of Maastricht was a horse-jumping Grand Prix a month ago. When the 12 European Community heads of government meet there on Dec. 9-10, they'll be facing higher hurdles than their equine forerunners—and greater hazards.

What's at stake is nothing less than the political and economic shape of Europe. For the aim at Maastricht is to draw up the rules and timetables for close EC monetary and political union. If the leaders can strike a deal, Europe would be on the road toward a single currency under a Eurofed by the end of the decade. And such institutions as the EC Commission in Brussels and the European Parliament would gradually gain power over defense and foreign policy.

MITTERRAND AND KOHL: MARCHING IN LOCKSTEP

Such a shift would amount to the first complete overhaul of the EC's founding Treaty of Rome since it was ratified in 1957. At that time, the goal was to anchor West Germany to the former Allied powers, bringing it under political control. Now the Euros, led by the French, are trying to harness German economic power. They want, as German Foreign Minister Hans-Dietrich Genscher put it, "a European Germany, not a German Europe."

GERMAN LOOK. Achieving this goal won't be easy. German Chancellor Helmut Kohl and French President François Mitterrand collaborated on a blueprint for a post-cold war Europe in 1990. But since then, the emerging structure has taken on a decidedly German look. Proposed new institutions such as the Eurofed appear suspiciously like their German equivalents, in this case the tightfisted Bundesbank.

As the summit approaches, skeptics point out that the Europeans are still squabbling over the basic EC '92 program and that past meetings have mainly produced empty talk. At the same time, the Europeans are becoming anxious: They remember what an uncomfortable bedfellow Germany can be. High German interest rates have helped send the German mark soaring, forcing a hike in French rates on Nov. 18 and pushing the British pound near the floor allowed in the European Monetary System. A single currency would put the screws to weak EC economies such as Britain and Italy by taking away the escape hatch of devaluing their currencies.

But for now, France, the key player on the Continent after Germany, is willing to take that risk. The French are marching in monetary lockstep with Germany through the EMS, and they know that discipline has won them big gains against inflation. They think a Eurofed that replaced the Bundesbank as Europe's monetary drummer would give them policy clout.

BIG FEARS. Unification talk unnerves the British. Prime Minister John Major and his cabinet are painting scary pictures of a meddling EC. But most observers think that's an exaggerated fear. Moreover, European executives are pushing hard for a success at Maastricht to follow up the EC '92 process of sweeping away barriers to trade. Otherwise, they argue, they will still face 12 monetary, fiscal, and legal regimes and won't be able to compete against Japan and the U. S.

But if Maastricht produces an agreement, as many analysts think likely, it will be mainly because of the combined weight of France and Germany. When they team up, the rest of the EC, including Britain, has little choice but to follow.

By John Templeman in Bonn

GLOBAL WRAPUP

JAPAN

In what could be an about-face on a highly symbolic trade issue, Japan is thinking seriously about letting imported rice into its hermetically sealed market. The change is coming because Prime Minister Kiichi Miyazawa, Foreign Minister Michio Watanabe, and other top pols have decided that Japan can't afford to be seen as obstructing a General Agreement on Tariffs & Trade agriculture accord. One option they are mulling is allowing small quotas for a few years, as a first step toward an import regime regulated by tariffs. While the U. S. has long been urging such a step, such countries as Thailand and China, which have lower growing costs, would probably wind up being the main beneficiaries.

HUNGARY

Hungary's stalled privatization drive should take off in the coming months, as half of the country's 1,800 industrial concerns are put on the block. Hungary, more than Poland and Czechoslovakia, is relying on Western investment banks and consultants. Already, the smallest 300 companies have been turned over to 80 investment bankers and consultant groups. An additional 600 medium-size concerns with up to 1,000 employees will be doled out to middlemen in January. The fee schedule provides fat 7.5% bonuses for sales completed within three months.

CZECHOSLOVAKIA

Siemens, the German electronics giant, has aced out Swiss-Swedish Asea Brown Boveri for a stake in engineering concern Skoda Pilsen. Siemens will take a 67% stake in a new power-engineering venture valued at about $170 million. But Siemens may wind up paying a stiffer price. Part of its edge over ABB was a promise to protect jobs by transferring some of its own projects to Skoda if Czech orders dry up. Siemens and ABB are still bidding for the transportation business of Skoda, a deal that will be decided within weeks.

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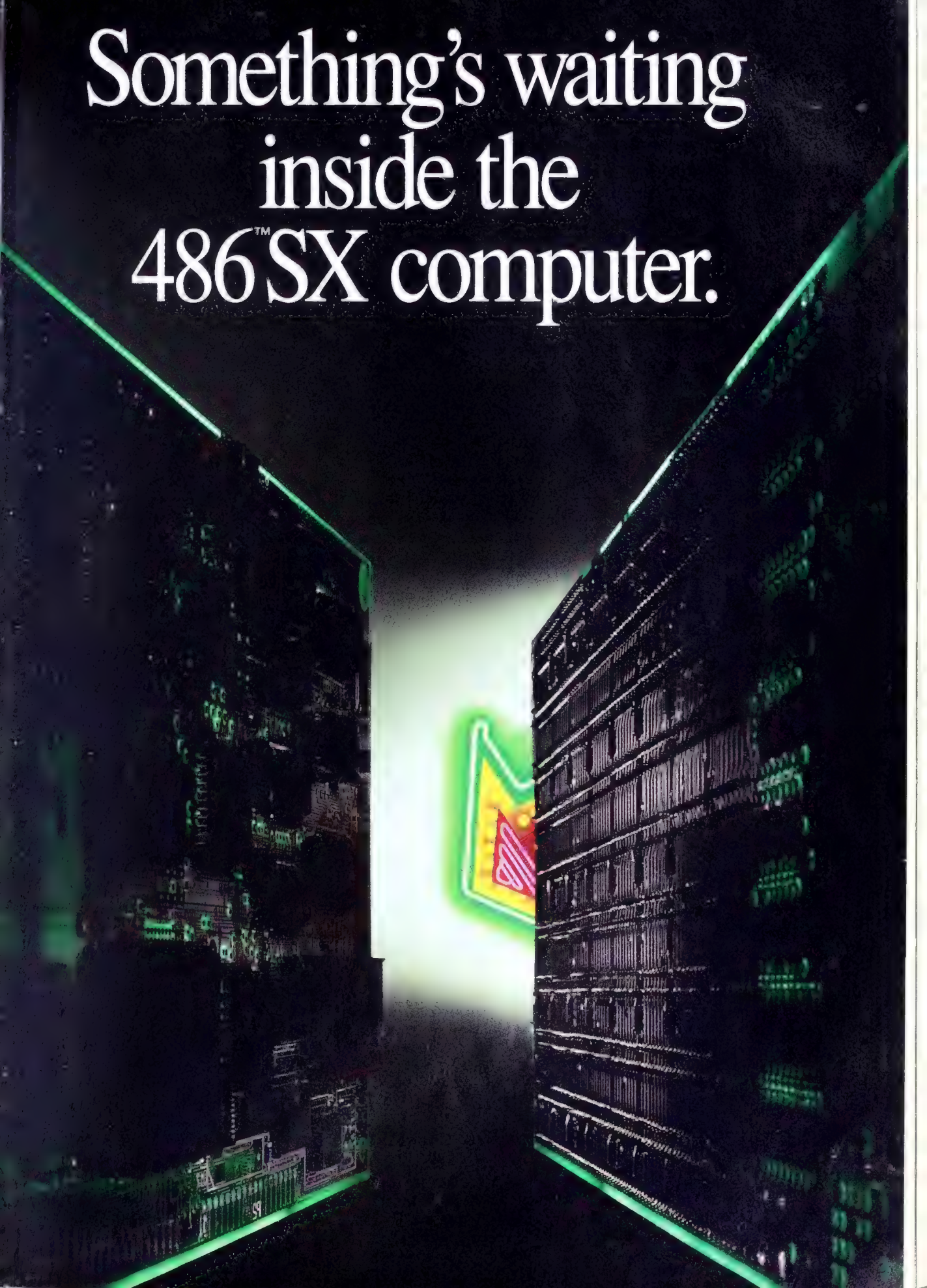

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POLITICS

RUNNING AGAINST THE BUSH ECONOMY

How the Democratic contenders are vying for the middle class

Last spring, as President Bush basked in his Persian Gulf victory, despondent Democrats concluded that nothing short of a prolonged economic slump offered them any hope of capturing the White House in 1992. If enough average Americans were frightened about the economic future, they reasoned, a challenger might have a shot at defeating the President.

Suddenly, the Democratic pipe dream of a competitive campaign looks more realistic. The flag-waving euphoria of Operation Desert Storm has evaporated, replaced by national anxiety over the stagnant economy. Soaring state and local taxes are fiercely squeezing the middle class. The huge budget deficit is paralyzing the federal government. And the Administration's tentative response to the malaise is making Commander-in-Chief Bush look like a bumbling lieutenant on the homefront.

The Democrats might be heavy favorites to win the Presidency next year if all they had to do was convince voters that the Administration has mismanaged the economy. But that's only half the job. Polls show that voters still are reluctant to trust the economy to the Democrats. One of the half-dozen Democratic candidates has to convince voters that he has a plan to promote growth. "People are looking for someone who says, 'Let's get this country moving again,'" says Democratic analyst William Galston. "We've got an opportunity. But it has to be seized."

All the candidates have picked up on the opportunity. "They are all moving toward a middle-class, progrowth message," says Stuart E. Eizenstat, chief domestic policy aide to President Carter. "To varying degrees, they're making a clear move away from the redistributionalist message." But the Democrats must still prove that their new middle-class concerns are serious.

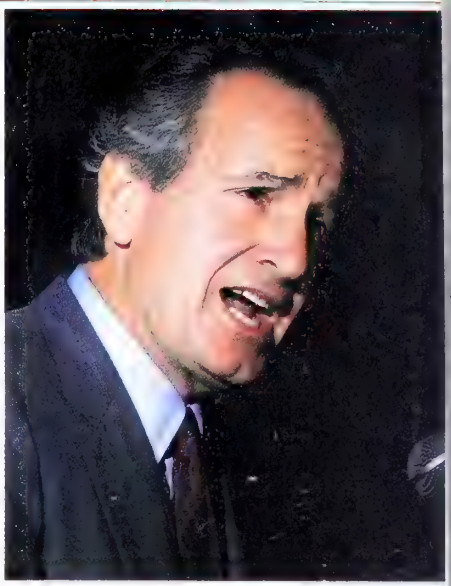
Ironically, New York Governor Mario M. Cuomo, who as of Nov. 26 remained a noncandidate, is getting the most media attention for his economic plan. His package, outlined for BUSINESS WEEK last summer (BW—Aug. 26), includes a deep tax cut on long-term capital gains, restoration of the investment tax credit, and expanded tax breaks for research and development. Fiscally, he would combine broad spending reductions, including cuts in entitlement programs, with tax hikes on the wealthy.

Of the declared candidates, only former Massachusetts Senator Paul E. Tsongas has developed a full-blown economic policy. Arkansas Governor Bill Clinton and Iowa Senator Tom Harkin are close behind. The others are just beginning to shape their programs.

BOB KERREY

Growth through innovation and education

- Middle-class tax relief
- Government subsidies for education
- Restructure federal government



TOM HARKIN

Growth through public investment

- Cut taxes for the middle class
- Raise them for the wealthy
- New direct public investment in infrastructure and education

The Democrats' emerging line of attack is to run against the economic excesses of the 1980s, just as Ronald Reagan won by running against the social-policy excesses of the 1960s and 1970s. The contenders will paint a portrait of a Reagan-Bush era in which the government allowed the U. S. financial system to crumble and America's international competitiveness to slump. Above all, they'll remind voters that the rich got richer and the middle-class got squeezed. Clinton is typical, blasting Republicans for glorifying "wealth and power over work and productivity and family."

'IMMORAL.' Although the Democratic candidates are just beginning to hammer their platforms together, they are building with many common planks: international competitiveness, health care reform, long-term investment, and the importance of education. The Democrats seem to have learned one vital lesson from three consecutive Presidential defeats: Voters don't want to hear about who gets the biggest piece of a shrinking economic pie. The '92 bunch preaches the old Democratic theme of fairness, but they remember to toss in plenty of rhetoric about economic prosperity.

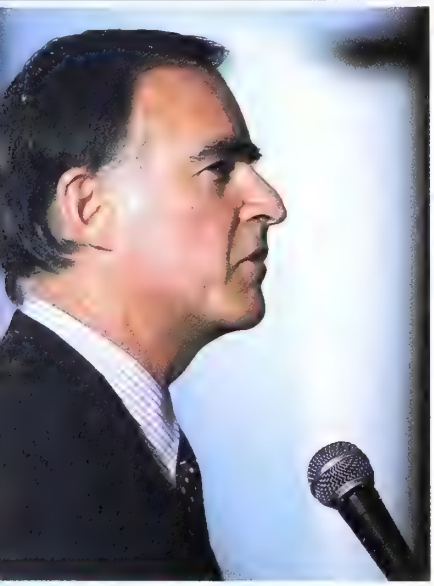
Most of these Democrats have also learned to avoid being boxed in by promising fiscal responsibility. In the last three Presidential elections, Democrats

have run as the candidates of fiscal prudence, embracing tax hikes to reduce the budget deficit. But this time, they are taking a page out of Ronald Reagan's 1980 playbook. The Democrats pound on Bush for allowing the deficit to get out of control and blast the red ink as "immoral." But, like Reagan, they don't let deficit worries tie their hands when it comes to campaign promises.

Many of the candidates are putting a new spin on another old Reagan trick—bashing the out-of-touch bureaucracy. The '92 version is pitched most vociferously by Nebraska Senator Bob Kerrey: Entire Cabinet departments ought to be scrapped so the government can better address the needs of the 21st century.

Each of the latest crop of candidates—Clinton, Kerrey, Harkin, Tsongas, Virginia Governor L. Douglas Wilder, and former California Governor Jerry Brown—has targeted an audience of suburbanites and middle-class Democratic defectors. But they are marketing their views in very different ways. Harkin is the most traditional Democrat, hitting hard at "trickle-down economics" and backing big new government spending programs. At the other extreme, Clinton and Tsongas talk as much about productive private investment as they do about fairness. Here is a snapshot of each candidate's economic views:

■ **The Firebreather.** Feisty Tom Harkin is an old-fashioned prairie populist with a message that echoes George S. McGovern's 1972 theme: Come home, America.



JERRY BROWN

End greed and political corruption

- An unspecified 'economic bill of rights'
- Grow out of the deficit

Harkin never misses a chance to compare Bush with Herbert Hoover. The Bush economic program, says Harkin, "can be summed up in three words: Cut capital gains. That's his answer to everything." Harkin's answer: "Investing the peace dividend here at home and stopping the export of U. S. jobs." To Harkin that means more money for roads and bridges, government investment in private technology and research and development, and more spending for education and health care. Harkin would pay for this by abandoning foreign commitments and slashing defense spending, while hoping that public investment would pay off in a stronger economy and more federal tax receipts. "We're not broke," he told the AFL-CIO on Nov. 12. "It's just that all the money is in a few hands. Money is like fertilizer. It works best when you spread it around."

Harkin is also the most outspoken when it comes to foreign competition. "I'd get tough on trade," he says, calling on the U. S. to negotiate trade agreements that promote "high wages here and improved wages abroad." Protectionist Harkin is a fervent opponent of the planned U. S.-Mexico-Canada free-trade agreement. He backs middle-class tax cuts, including efforts earlier this year to cut the Social Security payroll tax. Harkin would pay for these cuts by raising rates on the rich.

Harkin's economic gurus include Princeton University economist (and BUSINESS WEEK columnist) Alan S. Blinder and Jeff Faux, director of the labor-oriented Economic Policy Institute, a Washington think tank.

■ **Mr. Personal Responsibility.** Centrist Bill Clinton hammers home one fundamental message at every opportunity: Government has a responsibility to help people succeed, but individuals have the obligation to work toward their own success and to return something to society. That message permeates Clinton's economic wish list as well.

The Arkansas governor backs tax cuts for the middle class and capital-gains relief for investors in new businesses. But he doesn't believe that targeted tax breaks alone can spur the economy. Says Clinton: "We need a national strategy to create a high-wage, high-growth, high-opportunity economy."

Along with his fellow Democratic challengers, Clinton favors more spending on public works and increased investment in education. But unlike Harkin and others, Clinton is also an unabashed free-trader. And while he promises that his plan will make the U. S. more competitive in world markets, Clinton has a tough message for corporate executives: "I'm going to make it easier for your company to compete in the world, but I want the jet-setters of Corporate America to know that if you sell your companies and your workers and your country down the river, you'll get called on the carpet." How? Clinton has threatened to raise taxes on excessive executive pay.

The Clinton message grates on many traditional Democrats, who accuse him of being little more than a warmed-over Republican. Clinton insists differently. "We've got to move in a radically different direction" from Bush, he says. Then he adds: "We've got to move away from the old Democratic theory that says we can just tax and spend our way out of any problem we face." Clinton's stable of economic thinkers includes Robert J. Shapiro, vice-president of the Progressive Policy Institute, Harvard University's Robert B. Reich, and Ira Magaziner, an economic consultant.

■ **Mr. Industrial Policy.** Tsongas' top economic goal is restoring the U. S. manufacturing base, along with the strength of technology and financial services. He is an unapologetic fan of industrial policy and sees no shame in the government picking winners and losers. "Strategic investment in emerging technologies is part of an industrial policy which will result in some losers but will also result in some critical winners as well," Tsongas says.

He would encourage savings over consumption, a step that would reduce "the cost of capital to U. S. companies" and "our current hazardous dependence on

L. DOUGLAS WILDER

New fiscal discipline

- Reduce federal spending by $50 billion
- Cut middle-class taxes by $35 billion

[TOP TO BOTTOM] PHOTOGRAPHS BY ALEX QUESADA/MATRIX; CHAD SLATTERY

PAUL TSONGAS

Restore the health of manufacturing

- Tax incentives for saving and investing
- Direct federal aid to new technologies

outside sources of capital." Tsongas supports a tax cut for long-term capital gains, a tax credit for spending on research, and other incentives for investment in new ventures. He would pay for those tax breaks by raising the top tax rate on the wealthiest individuals. But, unlike his Democratic opponents, Tsongas is opposed to middle-class tax relief.

Tsongas supports government policies that would encourage long-term thinking by corporate managers: He'd provide legal protection to directors who back long-term investment strategies over quick returns to current shareholders, for example, and he wants to explore the idea of replacing quarterly financial reports with semiannual figures. He rejects outright protectionism but says he'd urge consumers to "buy American." Among Tsongas' economic advisers: Lester C. Thurow, dean of the Sloan School of Management at the Massachusetts Institute of Technology, and George N. Hatsopoulos, CEO of Thermo Electron, a high-tech conglomerate.

■ **The High-Tech Hero.** Nebraska's Kerrey is trying to shape his appeal more to independent young suburbanites than to traditional Democrats. His message: "taking what we have now and developing a new program for economic growth based upon education, information, imagination, conservation, and investment." What does that mean? Kerrey backs government investment in technology through both tax incentives and direct grants. He would reorient government research labs toward economic and environmental research instead of military projects. He also favors a national, interactive telecommunications system, to be built in an "unfettered, competitive environment," that will "bring the [information] revolution to our homes, our businesses, and our schools."

To reduce the deficit Kerrey proposes cutting domestic discretionary spending by 25% and defense spending by up to 40% over the next decade. Together, the two might add up to $150 billion annual savings in 1991 dollars. In part, he would achieve the savings by eliminating half of all Cabinet departments. But he has not suggested cuts in entitlements, such as Social Security or farm subsidies.

His tax plan, in line with his Democratic competitors, would focus on middle-class relief. Kerrey looks at these breaks as a way to restore fairness to the tax code, not so much as a way to stimulate the economy. Thus, he would offset the revenue lost from a middle-class tax cut with a tax increase on taxpayers earning more than, say, $200,000. Kerrey has backed efforts to cut Social Security payroll taxes. He says he'd be tough on trade but supports giving the President wide latitude in negotiating international agreements. Earlier this year, Kerrey supported legislation that gave Bush "fast-track" authority to negotiate a North American free-trade agreement, which is in the talking stage.

Where does Kerrey get his economic advice? From fellow Nebraskan Warren E. Buffett, chairman of Berkshire Hathaway Inc., and Harvard economist Benjamin M. Friedman.

■ **The Budget Hawk.** While most of his fellow Democrats are downplaying the federal deficit, Virginia's Wilder hits the problem head-on. Wilder hopes to build on his own track record in Virginia, where he has tackled a serious deficit problem without raising taxes. He'd cut federal spending by $50 billion—$10 billion from the Pentagon, $15 billion by eliminating other "low-priority" programs, and $25 billion by cutting "administrative overhead." Says Wilder: "Before we do anything else, we have to clean up the fiscal mess in Washington."

But not all of the savings would go to cut the deficit. Wilder backs a $35 billion middle-income tax cut and a new $15 billion grant program for innovative local government programs. Although he hasn't formulated a trade position yet, he told the AFL-CIO that he would have voted against authorizing negotiations on a North American free-trade plan. Wilder's economic advice comes mostly from a group of Virginia academics, such as economist John L. Knapp, and business executives.

■ **The Enigma.** The final announced Democratic candidate, former California Governor Jerry Brown, has not yet formulated an economic policy, according to his aides. So far, his entire message is an attack on campaign finance and the power of "corrupt special interests." In his announcement speech, Brown called for an "economic bill of rights" but never said what it would include. Brown says the nation should grow out of the deficit: "You can't contract your way out of this crisis." He says he might support a cut in the payroll tax and in long-term capital-gains taxes, but only if they are part of a broader growth package that includes infrastructure investment and a possible tax hike on the wealthy.

The Democrats are looking for votes by focusing on the economic concerns of average American voters: For the first time in recent elections, helping the middle class and promoting economic growth are mainstream Democratic concerns. But the candidates still must move beyond broad rhetoric to offer the public more specific solutions to the economy's miseries. Concentrating on economic growth is a good beginning. The new platform won't assure victory, even if the economy stays crummy. But unlike past campaigns, the Democratic message at least won't guarantee defeat.

By Howard Gleckman in Washington

BILL CLINTON

Innovation through competition and education

- Free trade
- Tax breaks for long-term investment
- College aid in return for government service

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THE BAD BOY OF SILICON VALLEY

MEET T.J. RODGERS, CEO OF CYPRESS SEMICONDUCTOR

When T. J. Rodgers speaks, people bristle. The chief executive of Cypress Semiconductor Corp. calls large chip companies "dinosaurs." He accuses their executives of whining for "political protection" rather than innovating and investing. He complains that current government policies are designed to "prop up sagging companies." And he derides Sematech, the government- and industry-funded consortium intended to restore America's edge in semiconductors, as a "corporate country club" for big business.

Who is Thurman John Rodgers, and why does he keep saying those terrible things about his industry? Well-known around Silicon Valley as just "T. J.," Rodgers certainly has a taste for controversy. His insult-peppered insistence that mediocre management is the cause of most of the chip industry's problems, not unfair competition from Japan, has earned him some staunch adherents and plenty of vociferous critics. Depending on whom you ask, he's either an arrogant, publicity-seeking braggart, or a brilliant and innovative entrepreneur. W. J. Sanders III, CEO of Advanced Micro Devices Inc.—and Rodgers' former boss—has compared him to Joseph Goebbels, calling him "the master of the half-truth." Management guru Tom Peters considers him "a national treasure."

ACID TEST. A boyish 43, Rodgers is often dismissed by his elder competitors as a naive upstart. But to his boosters, the founder of this fiercely competitive chip company run with bowstring tightness has combined technical brilliance with business acumen to become an innovative manager who represents a new generation of Silicon Valley executive, redefining entrepreneurship in a tougher, globally competitive world. "Cypress has been a strong rising star almost since its founding eight years ago," says Daniel L. Klesken of Prudential Securities Inc. "As we enter the '90s, it is clearly a force to be reckoned with."

As Cypress becomes more of an industry force, competitors say, Rodgers and his novel management theories will finally be put to a real test. It has been easy, they say, for Rodgers to sing the praises of fast-moving entrepreneurship, dismiss the competitive threat of Japan, and decry the notion that government should have a hand in guiding investment in the semiconductor business. Cypress can be nimble because it's tiny. It earned $33 million on just $225 million in revenues last year, making it a pipsqueak compared with industry behemoths Advanced Micro Devices (AMD), Intel, Motorola, National Semiconductor, and Texas Instruments, with collective revenues of $24 billion. "If Cypress were to disappear tomorrow, nobody would notice," says Craig R. Barrett, a senior vice-president at Intel Corp., the premier U. S. chip company.

And Cypress can shrug off global rivals because it has been a niche player, specializing in a fast memory chip known as the static random-access memory, or SRAM. It is only now, as its volume and product lines continue to expand, that Cypress and its founder will draw real competitive fire from Japanese and U. S. rivals.

It's certainly hard to argue with Rodgers' success so far. Analysts expect Cypress' earnings to rise nearly 16% this year, to $38.5 million, on revenues of $295 million, up 31%—this at a time when U. S. industry growth is around 5%. Aside from a growth rate that matches that of industry pioneer Intel at the same age, investors are impressed with the steady performance of Cypress. Even in tough times, its gross margins hover between 57% and 60% of revenues, and pretax earnings remain above 20%, outperforming virtually every chipmaker except Intel.

The company's long-term outlook looks promising, too. A group of subsidiaries now puts Cypress into new growth markets such as high-speed microprocessors and memory chips capable of powering supercomputers. And it just

FROM THE MOUTH OF T.J. RODGERS

ON COMPETING WITH JAPAN

"I don't believe in entering manhood contests with the Japanese. The Japanese are like sumo wrestlers. They're massive, and they train diligently. If you run at them directly, you'll lose."

ON THE CONSOLIDATION OF U.S. INDUSTRY

"The answer to our competitive problems is not to turn more power over to the companies that helped create the problems. In America, the diversity of our companies, our technology, and our ideas is a national strength we must not abandon."

PHOTOGRAPHS BY ANDY FREEBERG

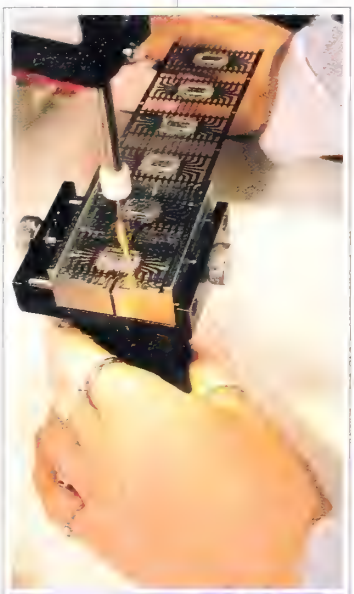
ON THE IDEA THAT THE U.S. CAN'T COMPETE
"Every failing CEO who uses [this] as an excuse supplies to his or her entire organization a clear leadership message that failure is tolerable or even expected. No American company can afford to hear that message."
ON HIS PHILOSOPHY OF MANAGEMENT
"Think small, total efficient. Think flexible. Merely imitating the Japanese is to misuse the past for the future. The same disciplined, multicultural society that manufactures precisely, with very high quality levels, has disciplines continues out of existence."
ON SEMATECH, THE GOVERNMENT-FUNDED SEMICONDUCTOR CONSORTIUM
"Joining Sematech is like sun-bathing on St. Tropez. Sure, it's open to anybody—if you can afford it. It's a bureaucratic rich boys' club that managed to get a big government subsidy. They've done nothing. Their accomplishments are pathetic."

finished the conversion of a modern manufacturing plant, bought last year from Control Data Corp., that will hike the company's capacity by 75%.

Those accomplishments are the result of Rodgers' tough, frugal, and highly aggressive management style. An electrical engineer with a PhD from Stanford University, he runs his company with an engineer's precision. He has designed software programs to help manage everything from sniffing out minor production glitches to keeping people within deadlines (box, page 70). Every Wednesday, he combs through a dozen printouts on the status of his pet projects, noting the names of managers whose goals are more than five weeks overdue. The offending manager is likely to get a handwritten memo from a pad inscribed "From the Desk of God."

He competes with Japanese giants by using a flexible manufacturing process that enables him to make hundreds of specialized types of chips. The secret is to move fast, making small amounts of the models customers want and changing quickly from one product to another. That sums up Rodgers' basic theory of management: Big companies are bad, small companies are good.

Similarly, he argues, U.S. companies should not build huge plants in an effort to go head-to-head with the Japanese, who have cheap capital and government support. Rather, American companies should stay small, exploiting their unique design technology and unsurpassed system of venture-capital-backed entrepreneurialism to maneuver around the slower-moving Japanese. "If we have to rely on juggernauts to win," he says, "the Japanese will do a better job."



QUICK-CHANGE ARTIST
A flexible manufacturing process lets Cypress make hundreds of types of chips, so it can turn out small lots and switch rapidly from one product to another

NO FREE MONEY. Cypress, he vows, will never be a huge, unwieldy company. Instead, it will be a conglomeration of small ones. Other companies are expanding by creating or buying new subsidiaries, but management consultant Peters says none has adopted the idea of "perpetual entrepreneurship" as completely as Cypress.

As he expands into new businesses, Rodgers spins new product lines or manufacturing plants into separate companies, each with a president, a board of directors (including Rodgers), and venture-capital-style funding from the parent. If the plants need more funding before creating positive cash flow, they must sell more equity to the parent. That keeps them extraordinarily frugal. Three subsidiaries that design new products now account for about 28% of Cypress' revenues, up from less than 12% only 18 months ago. The manufacturing subsidiaries sell products back to Cypress for resale by its centralized sales force and can find other customers if they wish.

Eventually, the managers of these units will be able to cash out by selling stock back to the parent, to private investors, or even on the public market. Cypress has the right of first refusal, just like any venture capitalist. In April, the three-year-old Round Rock (Tex.) plant sold its employee-held stock, 9% of the total, to Silicon Valley chip company Altera Corp., which also has its own chips manufactured at the plant. That brought some 190 Round Rock employees $7.4 million, including $2 million for the company's president, who then retired.

Just as he has tried to keep subsidiaries entrepreneurial, Rodgers has set up virtually every internal company function as its own profit-and-loss center. A group that tests parts before shipping them, for example, sells its services to the product lines. The upshot: Product managers who pay for the service aren't going to demand exotic tests unless absolutely necessary, since they'll have to foot the bill. "Free money is one of the biggest problems of a large company," Rodgers says. "We've gotten rid of socialism in the organization."

Not everyone agrees that the system gives managers the responsibility and freedom that Rodgers claims. Three years ago, for instance, he fired the founder and president of Aspen Semiconductor Corp., a Cypress subsidiary founded in 1987 to make ultrafast memory chips for supercomputers. The former executive, Narpat Bhandari, sued Rodgers, alleging that Cypress used his technological knowhow to create new products and then tossed him out.

Rodgers says Bhandari was a poor manager whose technology was worthless. Retorts Bhandari's son, Ravi, who was involved in his father's court case: "Every decision he made was undermined by T. J. Rodgers from the start. You had to get his approval to buy a pen." Bhandari, who is traveling and could not be reached for comment, recently signed an out-of-court settlement with Cypress.

No one denies that Rodgers can be an exacting, sometimes brutal boss. Chief Financial Officer Kenneth A. Goldman recalls at least four times in the past two years when Rodgers pounded on the desk in front of him, demanding the near-impossible. In one instance, Goldman was late in creating a new computerized system to track the financial results of each product line, and Rodgers dressed him down in front of several vice-presidents. Rodgers yelled and "got red in the face and huffy and puffy," says Goldman. "Usually when he gets upset about something, though, he's right on."

Valletta Massey, Rodgers' former secretary and now his girlfriend, recalls the time he handed her a stack of hand-drawn charts and asked her to find some software to turn them into slides for a presentation he was about to give. She spent five days with virtually no sleep to shop for the program, learn to use it, and create the slides. Exhausted and on the verge of tears, she finally told him she couldn't complete the project. His response: "I don't need a crybaby, I need a secretary." She got it done. "People think they know how demanding he is," says Massey. "They don't." Since January, Rodgers has fired three other secretaries. Cypress says its annual turnover rate is about 12% a year—not all that bad for any company.

DIVING WITH SHARKS. Rodgers drives himself hardest of all. He goes through his 13-hour business day fueled by little more than black coffee and vitamin C, sometimes making room for a dinner meeting. He takes a single break for a fast three-mile lunchtime run and thinks nothing of sweating through afternoon meetings wearing his running shorts, or greeting visitors with a damp post-run handshake. His schedule of meetings alone—from 8 a.m. to 5 p.m. or 7 p.m. four days a week—would be a full-time job for many people. He settles down in his office every evening for paperwork until about 9 p.m., and takes his "fun reading," letters and trade magazines, home for the evenings.

For all the publicity he generates, Rodgers is described by friends as a private person. He tries to keep weekends

free, and is apt to spend them cooking an Italian meal or frequenting the valley's cafes, restaurants, and movie theaters—he's a fan of Arnold Schwarzenegger movies. Rodgers drives himself to the edge even on vacations. When he goes snorkeling in Hawaii, he prefers areas with sharks. "He loves living on the edge of danger," says Massey.

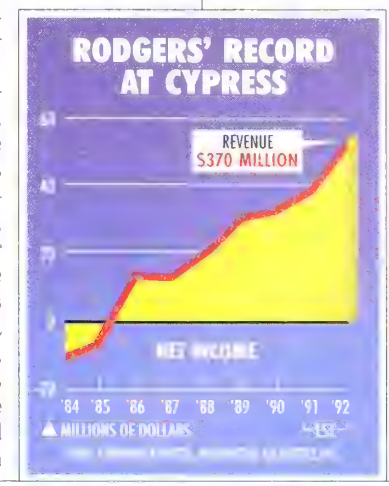
His competitive nature is firmly rooted in his Midwest upbringing. Rodgers was raised in Oshkosh, Wis., the elder son of a car salesman and a schoolteacher. Thurman John got the first names of his father and his grandfather, but even his baby pictures have T. J. scribbled on the back. It was Rodgers' mother who sparked his interest in technology. She taught basic electronics to soldiers in World War II, and started teaching her son from her textbooks before he entered kindergarten. He tinkered with appliances and radios through his childhood, surviving several shocks and a few nasty burns.

He was an exceptionally bright student, at 5 ft., 8 in. one of the smallest players on his high school and Dartmouth football teams, and a sharp dresser who "always dated the prettiest girls," recalls his brother James, a dentist in Denver. Still, James adds: "He was always the loner, the superintelligent guy all the way through school." He married his high-school sweetheart but divorced after 15 years.

'FROM THE DESK OF GOD'

Rodgers is a demanding, even brutal boss who is not averse to pounding on desks and belittling managers at meetings. But in his 13-hour business days, he drives himself hardest of all

Armed with an undergraduate degree in physics and chemistry from Dartmouth College, he went on to graduate school at Stanford in 1970. He studied under William B. Shockley, the inventor of the transistor, whom he has described as one of the few people he has met smarter than himself—although he says he never paid any attention to the racist theories Shockley espoused late in life. Shockley's company, Shockley Electronics, folded when his brightest engineers left to found Fairchild Semiconductor Corp., which became the incubator of Silicon Valley, spinning off Intel, National, and AMD—the "dinosaurs" that Rodgers derides.



In 1975, fresh out of Stanford with both a masters' and PhD in electrical engineering, he turned down a job offer from Intel, deciding that CEO Andrew S. Grove was unlikely to give him the freedom to pursue his own projects. Rodgers accepted a job at Advanced Microsystems Inc. (AMI). His project, a special chip technology he invented at Stanford, was a financial failure, and he was fired.

Once again, Rodgers turned down an offer from Intel, instead accepting a position at AMD. From CEO Sanders, Silicon Valley's dapper, flamboyant marketeer, Rodgers learned the importance of image and marketing. AMD was selling a memory chip similar to the unsuccessful one Rodgers had created at AMI, but AMD managed to charge nearly twice the price. In 1983, Rodgers found venture capital for Cypress and took Sanders' marketing vice-president, Lowell Turriff, with him. That inspired a lawsuit from AMD, starting a feud between Rodgers and Sanders that continues to this day.

LOSERS CLUB. Associates at AMD were surprised when Turriff left to co-found Cypress with Rodgers because the two had spent so much time in loud arguments. But Rodgers insists on hiring people as tough as he is. His hiring process is a strict regimen requiring at least 10 interviews, including one called the "pack of wolves" session, in which several people ask the candidates technical questions that they are unlikely to be able to answer just to see how they handle pressure.

Executives who survive that process are willing to stand up to the boss. Manufacturing Vice-President Mark K. Allen's idea of a vacation is to boat down a river in Ecuador in search of the Auca Indians, a seldom-seen and sometimes violent tribe. "Rodgers develops a winning team," confirms former CFO Stanley J. Meresman, who left Cypress to

CHART BY PAUL GRANGE/BW

join a computer company. "They have a lot of respect for him."

Rodgers' abrasive attitude has made him a lightning rod in the most heated debate in Silicon Valley: How to save the U. S. semiconductor industry—and by extension, all of high technology—from the onslaught of competition from the Far East. His answer? Do nothing. Sure, he acknowledges some unfair business practices from Japan. But when it comes to direct government aid for his own industry, he's willing to just say no. Companies seeking such help are "losers," he insists, and "the remedies they are proposing are preposterous."

The list of proposals he considers "preposterous" keeps growing. A pet complaint is the five-year-old industry consortium Sematech, partially funded with $100 million a year from the federal government. Its purpose—to conduct joint research into manufacturing techniques that can be parceled out to members—is "like General Motors trying to become more efficient by having a centralized fin-design department." The 1986 Trade Agreement, which punished Japanese companies that were dumping chips in the U. S. below cost by forcing them to raise prices was tantamount to "a jury awarding damages from the victim to the criminal."

Such talk angers many of his competitors concerned about the American chip industry's dangerous slide in market share. The Semiconductor Industry Assn. (SIA) points worriedly to figures showing that the U. S. share of the world's chip business declined to 37% in 1989, from 57% in 1982. Japan, at the same time, increased its share from 33% to 50%. Intel and others argue that the chip business has grown so expensive, with a single big chip plant costing close to $1 billion to build, that they must now emulate the Japanese and pool their resources. That's why 14 chip companies, representing some 90% of the U. S. industry's revenues, joined Sematech.

CLEANING UP

By playing the niches, Cypress so far has avoided serious global rivals. But as the chipmaker's volume and product lines continue to expand, it will begin to draw real competitive fire

JUST PLAIN WRONG? But to Rodgers, Sematech is the great American cop-out. He believes most of the U. S. market-share erosion is an illusion created by currency fluctuations between the dollar and the yen. The SIA says only 30% of the decline is attributable to currency. Rodgers also believes improved U. S. quality from the best companies has virtually stopped any real erosion in the last few years. He cites his experience: Last year, Cypress offered to let Toshiba Corp. make its own version of a chip it now buys from Cypress. After evaluating the part, Toshiba said it could make the chip only by building it 30% larger, and with a higher defect rate. "When we called their bluff we found out they didn't have the technology," says Vice-President Allen. A Toshiba official says the chip wouldn't have made economic sense.

Competitors argue that the facts Rodgers uses to support his arguments are sometimes questionable, or just plain wrong. In a recent speech to Congress, for example, Rodgers complained that he had trouble buying a piece of chip-making equipment from Westech Systems Inc., a company with Sematech contracts, because the consortium had ordered it not to sell the machine to nonmembers for a year. Thomas N. Tucker, president of Westech, denies the charge and has met with Rodgers to tell him he is wrong. "It seems no amount of data or discussions will change his mind," Tucker says. Still, an agreement with Sematech, signed by Tucker and provided to BUSINESS WEEK by Rodgers, does contain a one-year restriction on the sale to nonmembers of technology developed in connection with Sematech contracts.

Rodgers also irritates people because he's so fond of denigrating his adversaries. Says Sanford L. Kane, a former IBM executive who tried to start another chip consortium: "It's one thing to say, 'Here's what I think.' But he says, 'Everyone else is an idiot.' " And William J. Spencer, president of Sematech, says Rodgers is more talk than action. "Cypress has probably appeared in print more because of his bashing of Sematech than because of the success of his company," he says.

'ICONOCLASTIC.' It's true that Cypress—and Rodgers—still have a lot to prove. For one, it's hardly clear that the future in semiconductors belongs to the small and nimble. Rodgers is even betting that his own microprocessor subsidiary can one day overtake Intel. Ross Technology Inc., a Cypress unit headed by former Motorola chip designer Roger M. Ross, is making chips for Sun Microsystems. Rodgers claims Sun's workstations will eventually supplant PCs—and Ross will effectively replace Intel. That's quite a

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BENCHMARKS — **INFO WORLD**

September 9, 1991

Windows Spreadsheets

	Microsoft Excel Version 3.0	Lotus® 1-2-3® for Windows™ Version 1.0
CALCULATION (all times in seconds)		
Arithmatic model		
Recalc partial	<1	2.5
Recalc all	1.6	4.3
File load	6.9	10.5 – 12.2
File size (in bytes)	243,644	219,258
Financial model		
Recalc all	11.4	34.9
Scientific model		
Recalc all	3.7	10.0
CONSOLIDATION		
Page-oriented model	5.0	<1
File-oriented model	<1	1.3

Tests performed on a COMPAQ DESKPRO 386/20e™ with 4 megabytes of RAM and 110-megabyte hard drive. Times given as ranges reflect when cursor control was returned and when the recalculation was completed.

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claim, considering Intel's dominant market position and its $3.9 billion revenues. For now, the vast majority of business software is still being developed for Intel-based machines.

One thing is certain: When T. J. Rodgers talks, Silicon Valley listens. "He's a breath of fresh air," says Representative Tom J. Campbell (R-Calif.), the congressman from Silicon Valley who has seen him in action testifying on Capitol Hill on competitiveness issues. "He's bright, iconoclastic, he shakes things up, and he brings things to the debate." And Rodgers may even have sparked some changes at Sematech. For example, it is considering whether to lower its minimum dues to make itself more accessible to smaller chipmakers.

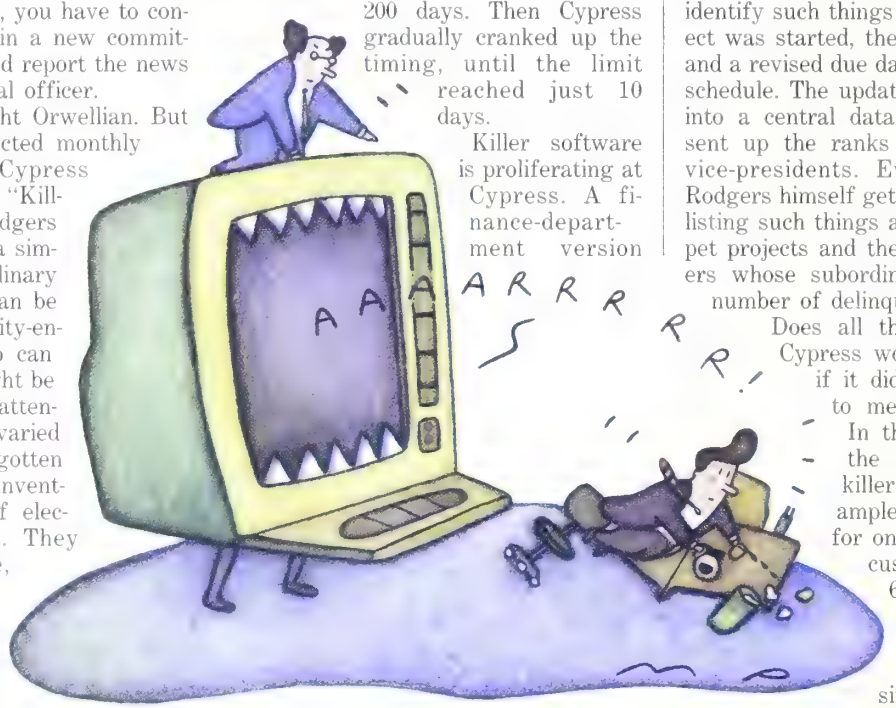
There are lots of less vocal executives who agree with many of Rodgers' views. Says George Gilder of the Hudson Institute and author of a book about Silicon Valley: "He's the spokesman for the silent majority of Silicon Valley." As Cypress grows in stature and the debates on U. S. competitiveness increase, the insistent voice of T. J. Rodgers will be even more difficult to ignore.

By Richard Brandt in San Jose, Calif.

HERE COMES *ATTACK OF THE KILLER SOFTWARE*

How's this as an incentive to keep your eye on the ball: Imagine you're a manager who has ordered a product from an outside supplier. The order fails to arrive on time, but no one has explained to senior management why it will be late, so a software program shuts down all of the computer systems in purchasing. To get them back up, you have to contact the supplier, gain a new commitment for delivery, and report the news to your chief financial officer.

It sounds downright Orwellian. But such scenes are enacted monthly at T. J. Rodgers' Cypress Semiconductor Corp. "Killer software," as Rodgers calls it, is based on a simple insight: An ordinary computer program can be a dramatic productivity-enhancing tool. But so can the threat that it might be turned off. To call attention to boo-boos as varied as a late order or forgotten inventory, Rodgers invented the equivalent of electronic bloodhounds. They scan, for example, computerized purchase orders to sniff out delivery dates that haven't been met, and then magnify the minor problem by shutting off critical software until the problem is solved.



'DEATHLY AFRAID.' To outsiders, it may seem a draconian, even self-destructive solution. But Rodgers says the benefits gained from increased productivity outweigh the costs of an occasional shutdown. "It draws everyone's attention," he says. "They say: 'What happened, and how can we make it never happen again?' " The killer software is a critical tool for a business so complicated that minor slip-ups can spread like spilled marbles. And managers from other companies, including Hewlett-Packard and Alcoa, have begun experimenting with Cypress' techniques.

The idea was born nearly three years ago, when managers found 500-day-old parts languishing in inventory. The company started tracking parts electronically and created a software routine that would shut down the inventory system if parts sat more than 200 days. Then Cypress gradually cranked up the timing, until the limit reached just 10 days.

Killer software is proliferating at Cypress. A finance-department version works in reverse, automatically restoring credit to customers put on the credit-risk list if their status is not reviewed within six months. "The finance guys are deathly afraid of that one," says Rick Foreman, director of strategic systems and administration.

One of the company's most rigid systems isn't designed to zap laggards but to give employees more autonomy. Called the "goal system," it is a project-tracking setup that helps people organize their work and lets top management monitor the output of some 11,000 people—every employee except factory workers and laborers. The idea is to let them set their own goals and deadlines, and to intervene only when goals are not being met.

Rodgers designed the system himself over the years, from a chalkboard to its current form on a network of computers. On each line of a spreadsheet, employees list all their current tasks or goals, along with codes that identify such things as the date a project was started, the original due date, and a revised due date if it slips behind schedule. The updated lists are loaded into a central data base weekly and sent up the ranks to managers and vice-presidents. Every Wednesday, Rodgers himself gets a dozen printouts listing such things as the status of his pet projects and the names of managers whose subordinates have a high number of delinquent goals.

Does all this actually work? Cypress wouldn't be Cypress if it didn't have software to measure the results. In the first year after the company installed killer programs, for example, Cypress' record for on-time shipments to customers rose from 65% to 90%. And managers say the goal system improves morale, since people always get credit for what they have done.

Other companies are taking heed. Since writing about the idea in the *Harvard Business Review* last year, Rodgers has received written requests for details from managers at some 50 companies. After visiting Cypress, D. Fred Stewart, an Alcoa engineering director, started a pilot modeled after the goal system. "I was impressed by the enthusiasm of the people there," he says. "They're really focused on getting things done." Small wonder, with those electronic bloodhounds at their heels.

By Richard Brandt in San Jose, Calif.

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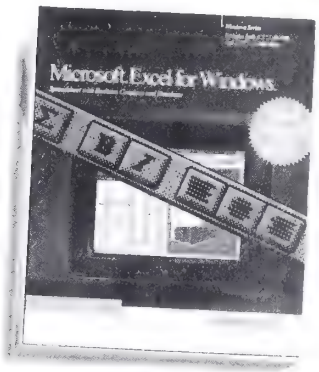
2nd	Quattro® Pro 2.0	8.4
3rd	Lotus® 1-2-3® 3.1	7.2



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RETAILING

INTERNATIONAL DIVISION CHIEF BOUTS MAY REAP $1.5 BILLION IN JAPANESE SALES BY 2000

GUESS WHO'S SELLING BARBIES IN JAPAN NOW?

It wasn't easy, but Toys 'R' Us finally cracked this tough market

Jumping out of his car in an empty parking lot 40 miles north of Tokyo, Larry R. Bouts stands back and admires the white, spanking-new building sprawling before him. "Can you believe this?" he exclaims. "Pretty amazing!"

White buildings and empty parking lots normally have little power to amaze. But Bouts is right to exult over this particular patch of real estate. Bouts, 42, is president of the international division of Toys 'R' Us Inc., and this is his first look at the company's inaugural store in Japan—and the very first large U. S.-owned discount store there.

SLOGGING. When Bouts's new Ibaraki Prefecture store opens on Dec. 20, it will culminate three years of heavy slogging through the swamps of Japanese bureaucracy, local vested interests, labyrinthine real estate practices, and heavy, often hostile, Japanese press coverage. And it will be the most visible payoff to date of the two-year-old, U. S.-inspired Structural Impediments Initiative aimed at prying open new markets for American companies in Japan. "We hope Toys 'R' Us will be the first in a long line of stores to locate in Japan," says Commerce Secretary Robert A. Mosbacher.

Small wonder Japanese toymakers and retailers are edgy. Toys 'R' Us Japan Ltd. hopes to be opening 10 stores per year from 1993 through the end of the decade. Each is expected to generate sales of at least $15 million its first year. That foretells minimum annual sales of $1.5 billion by the year 2000, roughly half of which would be from toys made outside Japan. Toys 'R' Us, with global revenue of $6.4 billion, can bring a lot of firepower to bear. The typical small Japanese toy store stocks between 1,000 and 2,000 different items, while Toys 'R' Us will start out with about 8,000 items, rising to 15,000 over time. If it can offer toys for 10% to 15% less than competitors, as it does elsewhere and as Bouts says is possible, Toys 'R' Us will have a huge impact on Japanese toy retailing. With more than $6 billion in annual sales, Japan is the world's No. 2 toy market after the U. S.

It was the size of that market that moved Toys 'R' Us to launch the effort in the first place. Anticipating the day when it would saturate its domestic market, America's largest toy retailer went international in 1984, first in Canada, then Europe, Hong Kong, and Singapore. Japan was always tempting, but the country's notorious Large-Store Law, aimed at protecting the country's politically powerful small shopkeepers, seemed an unbreachable barrier. Under the law, local communities and the Ministry of International Trade & Industry often managed to stall incursions by big retailers, such as Japanese supermarket operator Daiei Inc., for 10 years or more.

But by late 1988, recalls Toys 'R' Us Vice-Chairman Robert C. Nakasone, "there were rumblings MITI was thinking about a major change." Pressure was mounting from the U. S., big Japanese retailers, and consumers looking for the lower prices mass merchants could offer. Toys 'R' Us immediately began looking for a local partner to guide it through the ordeal it faced. In early 1989, Bouts's predecessor met Den Fujita, president of McDonald's Co. (Japan). "He was our kind of guy," says the U. S.-born Nakasone. "He was bicultural, and he had quickly grown a retail business in Japan. He really understood the impatience of a company like ours."

BIG MAC ABOARD. Fujita also liked what he saw. Since McDonald's serves a similar clientele—families with small kids—he figured it could profit from building restaurants on the same sites as Toys 'R' Us. And after 20 years of building McDonald's into Japan's largest fast-food operator, with $1.3 billion in sales, Fujita had acquired an encyclopedic knowledge of Japanese real estate. "If you name a city, I can see the post office, train station, everything," boasts Fujita, who estimates Japan has at least 100 sites suitable for a Toys 'R' Us. McDonald's Japan quickly agreed to take a 20% stake in Toys 'R' Us Japan.

In the spring of 1989, MITI unveiled its new retail industry "vision," which included eventual relaxation of the Large-Store Law. And the U. S. began proposing its Structural Impediments Initiative, aimed in part at cracking open Japanese markets. Nakasone, Bouts, and Fujita began lobbying their respective governments for help. Bouts and other Toys 'R' Us executives met directly with U. S. Trade Repre-

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sentative Carla A. Hills and her deputy, Linn Williams. Bouts says Hills's backing was critical. Back in Tokyo, Fujita made the rounds of his government contacts, many of them former classmates and fellow alumni of the University of Tokyo's elite law department.

By April, 1990, MITI had agreed to shorten the big-store application process to no more than 18 months. "That was a major, major breakthrough," says Nakasone. He and Bouts already had handshake agreements with various landlords. Within weeks, the company had submitted building applications for several locations.

COOL RECEPTION. But the work had just started. Since then, Toys 'R' Us has been slowly negotiating the local barriers still in place after the Large-Store Law's amendment. Take the fairly typical case of Sagamihara, a Tokyo suburb of 520,000. In May, 1990, Toys 'R' Us started talks on opening a store there. The welcome was hardly a warm one. "The site Toys 'R' Us had chosen didn't fit our plans [for development]," says Goro Kakishima, senior managing director of Sagamihara's Chamber of Commerce & Industry. "But we couldn't legally prevent it." So in July, conforming to MITI-prescribed procedures, Toys 'R' Us submitted applications to the ministry, Kanagawa Prefecture, Sagamihara City, and the Chamber of Commerce.

'You won't see deep discounts,' says Bouts. 'Real estate and distribution costs are high here'

In August, Toys 'R' Us had to join in an "explanation meeting" at the local public hall. Next came presentations to Sagamihara's Commercial Activities Council, a MITI-inspired body of 18 consumers, merchants, professionals, and academics. After four meetings, the council gave the green light in June, 1991. Toys 'R' Us could open its store after Dec. 1. But like many other stores, it had to close every day by 8 p.m. and shutter itself 30 days a year. In addition, Toys 'R' Us had to consult with other bodies over possible traffic problems. By September, those consultations and construction delays forced a postponement of the Sagamihara opening until March, 1992. Determined to open one store this year, Toys 'R' Us turned to Ibaraki.

At Ibaraki, the store and 850-car parking lot are massive by Japanese standards. The colorful, English-language

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Toys 'R' Us signs jump out at passers-by. Bouts says the store will get only minimal customization—some Japanese-language signs inside and perhaps a section for items especially popular with Japanese. Although he's aiming for discounts of up to 15%, he's not making any promises. "You won't see deep discounts," he says. "Real estate and distribution costs are high here."

The early stores will feature a mix of roughly two-thirds Japanese toys and one-third imports, including Huffy bikes, Mattel's Barbie dolls, and Tonka trucks. But Bouts says imports' share will gradually rise to as much as half. Meanwhile, local opposition seems to have subsided. "An integrated store for children is a good thing," says Katsuyuki Fujii, whose small Toy's House Joy sits just a half-mile down the road from the first Toys 'R' Us store. "My wife can't wait to go shopping there for our kids." Fujii says he'll survive by finding a profitable niche—which he won't specify.

HUE AND CRY. Nobody at Toys 'R' Us is predicting clear sailing, though. Last year, for example, frightened toy shop owners in the city of Niigata generated international headlines by clamoring against the application of Toys 'R' Us to build a store there. They succeeded in delaying the opening until 1993.

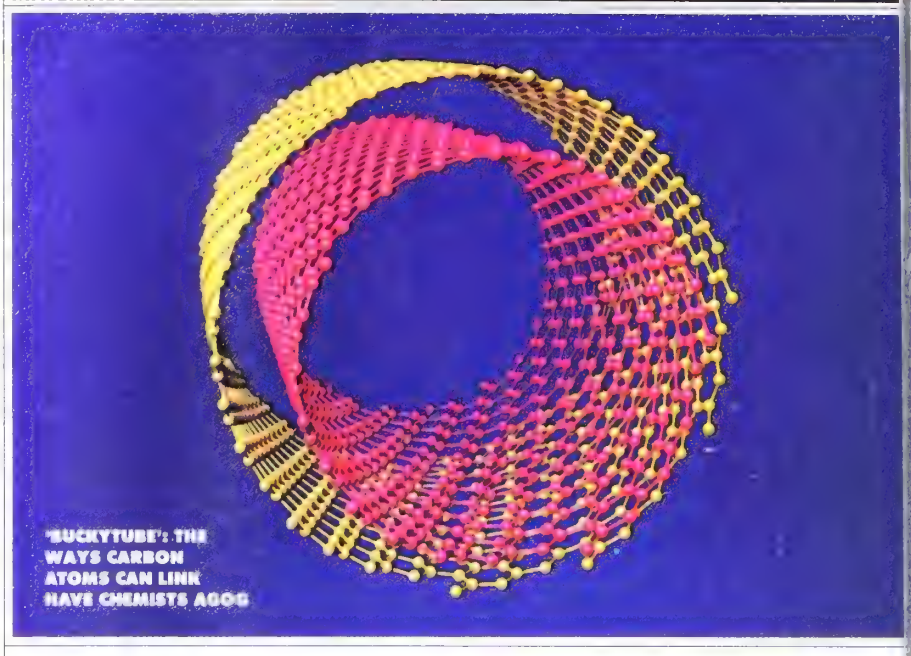
Toys 'R' Us still faces obstacles in Japan. It's having a hard time winning low-cost, direct-supply contracts from local toymakers, who don't want to upset powerful wholesalers and longtime customers. Such arrangements are key to the ability of Toys 'R' Us to discount. Only one major Japanese toymaker, Nintendo Co., has publicly stated it will sell directly to Toys 'R' Us Japan. And small retailers such as Fujii say they expect lower prices from wholesalers, and possibly financial support, if the heat from Toys 'R' Us gets to be too much.

Despite their anxiety over Toys 'R' Us, Japanese retailers probably don't have to worry about an onslaught of giant U.S. retailers. True, smaller specialty stores such as Computerland and Brooks Brothers Inc. are already in Japan. But their operations are a far cry from those of a "superstore" operator intent on commanding a market. As analyst Richard Baum of researcher Sanford C. Bernstein Inc. puts it: "Only a handful of big retailers have the kind of format, supplier relationships, and expertise that let them succeed globally." So, the intricate Japanese system of retailing may, by and large, remain undisturbed by U.S. companies. That larger issue isn't the giant toy retailer's problem, though. Toys 'R' Us is just intent on expanding its tenuous foothold in the world's toughest retail market.

By Robert Neff in Tokyo, with bureau reports

Science & Technology

MATERIALS



'BUCKYTUBE': THE WAYS CARBON ATOMS CAN LINK HAVE CHEMISTS AGOG

SCIENCE'S AMAZING NEW BUILDING BLOCKS

Fullerenes may lead researchers in undreamed-of directions

At first glance, chemist Richard E. Smalley's laboratory at Rice University in Houston looks more like a welding operation than a research center. In one corner, a Sears arc welder vaporizes a carbon rod. In the searing 2,500C heat of the machine, atoms of common carbon—as in pencil lead—cling together in a grimy soot. But that black powder contains a miracle of chemistry: carbon atoms that have combined in never-before-seen shapes—molecular soccer balls, tubes, and even a helical form.

In these strangely shaped molecules, called fullerenes, scientists have discovered a gold mine of tantalizing possibilities. This new form of carbon displays unique properties. Linking up these molecules or playing other chemical tricks, scientists say, could create new catalysts, superstrong plastics, superconductors that carry electricity without resistance, and even optical switches. "We are playing with the building blocks for totally new materials," says Smalley.

BREAKTHROUGH. Six years ago, it was Smalley and British researcher Harry W. Kroto of the University of Sussex who, while studying large molecules together, discovered structures composed of 60 carbon atoms arranged in soccer-ball-like spheres. They were dubbed "buckminster fullerenes" and "buckyballs" after the geodesic domes created by inventor R. Buckminster Fuller. But the substance—the first new form of carbon discovered since the 1800s—remained a curiosity until last year, when scientists at the University of Arizona and the University of Heidelberg, working independently, figured out how to produce millions of fullerenes in an electric arc.

Since then, like children modeling Play-Doh, researchers at Du Pont, NEC, AT&T, and universities such as UCLA, UC Santa Barbara, and Rice have been squeezing the material through chemical sieves, baking it in ovens, and lacing it with metals and plastics. On Dec. 5, they plan to explain their latest gains at the Materials Research Society in Boston. The research shows scientists are just beginning to decipher the nature of these amazing molecules—and guess at their ultimate applications. "We haven't scratched the surface of what might come out of work on fullerenes," says Mark M. Ross, program manager at the Office of Naval Research, which funds some of the research.

Scientists are intrigued with fuller-

es because carbon is so important in l aspects of life. It is the basis of carhydrates, proteins, fats, and other mponents of cells. And it is at the art of industrial economies—in carn-based fossil fuels, petroleum-based astics, and other chemicals. Carbon atns also form strong bonds between ie another, a characteristic that gives amonds their strength.

Fullerenes are already helping researchers who are trying to produce sine diamond crystals to make superfast mputer chips. In October, Robert ang, head of the materials research nter at Northwestern University, vaorized graphite and used the resulting llerenes to make an ultrathin film. He as able to grow multiple diamond crysls on top of the film. The sult was thousands of nes better than similar efrts on silicon have been. ie next trick: finding a way use fullerene thin films to ltivate single diamond ystals that are needed for rcuitry.

Because the shape of molels plays a part in deterining the properties of a bstance, scientists believe e quirky fullerenes may pen up new worlds. In Sepmber, University of Califora at Los Angeles chemist rançois N. Diederich report- that some fullerenes reemble the double-helix ructure of human genes in NA. What's more, helix-like llerenes have right-handed id left-handed versions, milar to biological molels. "That is a very pround property," says Dierich, who predicts the two ersions may help chemists oduce purer drugs with wer side effects. Fullerles can also change the avelength of light, a property that ight eventually be harnessed to proce optical switches for communication.

NCHED AND PULLED. In October, Sumio jima, a research fellow at NEC Corp.'s ndamental Research Lab near Tokyo, nounced that he had found under a icroscope yet another shape in the ot: tubular molecules consisting of as any as 20 cylinders of carbon inside ie another. One day, these defect-free bes might be developed as superrong fibers in construction materials.

Although the research is just beginng, fullerenes are unusually promising emical building blocks because they e "molecules that behave like an om," says Katsumi Tanigaki, head of ie NEC lab. If scientists insert noncarbon atoms into fullerenes or attach them, the resulting molecules have different chemical and physical characteristics. Eventually "we can make new molecules with properties never even predicted by science," Tanigaki says.

So researchers are zealously stringing atoms of everything from iodine to yttrium and lithium between fullerenes or on their surfaces as if they were popcorn on a Christmas tree. And the early results are riveting. At the University of California at Santa Barbara, Fred Wudl, a professor of chemistry, strung ammonia-like groups of molecules along the surface of a buckyball: It became magnetic. Wudl and others also squeezed atoms of potassium between buckyballs—they became superconductors. Last summer, NEC researchers slipped in atoms of cesium and rubidium. That raised the superconducting temperature of the fragile and unstable fullerenes to -400F, still far below the high-temperature superconducting materials. But if researchers insert a sodium atom in the gaps between the carbon spheres, the new fullerenes don't conduct electricity at all—they become insulators instead.

By adding other atoms and taking advantage of fullerenes' propensity to react with other substances, scientists hope to create new medical and industrial catalysts. To do their work of controlling chemical reactions, catalysts break and reform the bonds between atoms. As it turns out, the hollow-centered buckyballs sop up electrons from neighboring atoms, while the twisting lattices of helix-shaped fullerenes give up electrons. Du Pont Co. researchers have demonstrated they can make a fullerene catalyst by hitching a methyl group of atoms to a buckyball. The buckyball snatched three electrons from the group of carbon and hydrogen atoms. Molecules that absorb electrons like this are important catalysts in the production of paints that resist fading in light and clear plastics, such as Du Pont's lucite.

SERENDIPITY. Despite fascinating laboratory results, many obstacles remain before fullerenes emerge as workhorse materials, which is why some scientists and institutions aren't yet rushing to the patent office with their results. To take full advantage of the potential of fullerenes, scientists must be able to insert foreign atoms into the molecules. That will require them to open the bonds between carbon atoms and then reseal them. But they are having difficulty dissolving the tight bonds that hold carbon atoms together. So far, the standard techniques—chemical peels, laser blasts, and high temperatures that dissolve most other bonds between atoms—haven't worked.

Scientists are also hampered because theory hasn't caught up with the rush of new laboratory discoveries. Existing theories, largely based on the behavior of smaller molecules, don't adequately explain how these curious new structures behave.

A better understanding of the behavior of fullerenes could have profound ramifications. Knowing precisely how fullerenes become superconductors, for instance, may lead to improvements in other types of superconductors. If research on fullerenes does that, "it will be important in itself," says Andrew Kaldor, director of fullerene research at Exxon Corp.'s Corporate Research Lab.

For his part, Smalley is leading the rush to test what happens to fullerenes when bits of metal are attached to the outside, the inside, or in between. He confidently envisions a day when fullerenes will be snapped together like Lego blocks to create miniature factories cranking out catalysts. Indeed, the potential for fullerenes is so fantastic that researchers expect to have soot on their hands for years to come.

By Gary McWilliams in Boston, with John Carey in Washington and Neil Gross in Tokyo

THE BRAVE NEW WORLD OF FULLERENES

Carbon molecules with radically different shapes and tantalizing new properties are transfixing researchers

BUCKYBALLS These clusters of atoms have magnetic and electrical properties that could allow carbon to replace metals in recording and electronic devices

TUBULAR FULLERENES NEC scientists plucked these whisker-shaped molecules from carbon residues. They may be able to conduct electricity without resistance

HELICAL FULLERENES Their atomic structures mimic the double helix of DNA. They might, one day, be useful in developing ultra-precise catalysts that control chemical reactions

THIN-FILM FULLERENES Ultrathin deposits of vaporized carbon entice diamond crystals to form. Thin films may help researchers more easily cultivate diamonds for hardened cutting tools or for computer circuits

DATA: BW

RAY VELLA/BW

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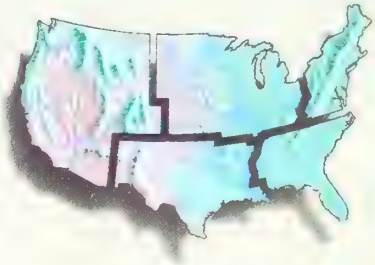

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Developments to Watch

DITED BY ROBERT BUDERI

THE PATRIOT MISSILE OF DRUG DELIVERY

One big problem with gastrointestinal-tract ailments is that the drugs used to fight them are often absorbed or destroyed by the stomach before reaching their target. The way to home in on this area is for the patient to swallow a long tube, which can be maneuvered into place before medicine is fed through it.

Researchers at the tate University of New York at Buffalo and that city's Mil- rd Fillmore Hospital have devised a better way—a "smart" ll to deliver drugs to digestive-tract targets without a medi- l sword-swallowing act. The pill holds a tiny radio transmit- r whose signal is tracked by a receiver and antennas built to a vest the patient wears. A small computer plots the pill's cation and triggers a propulsion system that ejects the medi- ne. The technique could be useful in battling intestinal ail- ents such as Crohn's disease or as a painless alternative to jecting insulin to treat diabetes. Clinical trials could start rly in 1992.

OUND: THE MISSING LINK ROM GARBAGE TO POWER PLANT

Researchers have long struggled to convert garbage into fuel pellets that could be burned with coal to generate ectricity. But two roadblocks arose. Systems to separate cyclables such as plastic and glass from combustible gar- age were poor at best. And fuel pellets often broke up in ansport and rarely stayed intact if stored for long periods.

In recent years, steady technological gains have largely lved the first problem. So researchers at Argonne National aboratory in Illinois tackled the second. After testing 160 emical stabilizers, they found that adding calcium hydroxide the mixture hardened pellets enough that they could be ansported without problems and stored for three years with- t decomposing. Tests show that the newly reformulated llets, when burned with coal, cut acid-rain emissions up to 5% vs. coal burned alone. What's more, the pellets cost 30% ss to produce than coal. Because the black stuff has a higher nergy output, a likely fuel mixture is 20% pellets, 80% coal. In ovember, Edison (N. J.) recycler Catrel USA Inc. licensed the chnology and says the pellets will be widely used by 1995.

HE INFORMATION HIGHWAY AY GO FOUR-LANE

For years, federal agencies have been laying the groundwork for a $400 million "information highway" that would nk scientists and schools to far-flung supercomputers and oraries. That vision got a boost on Nov. 22 when Congress assed a supercomputer bill, adding its stamp to the Bush dministration's plans for such a network.

Instead of starting from scratch, the idea is to expand an existing science network called NSFnet into the world's highest-capacity information superhighway, dubbed the National Research & Education Network. Currently, NSFnet is managed by a joint venture between IBM and MCI Communications Corp. under National Science Foundation auspices. But critics say this monopoly could hamper innovation and offers an unfair edge on potentially lucrative spin-offs. So, also on Nov. 22, the National Science Board approved a plan to put management of the network up for bid again early next year—with two operators, not one. "It will give us two avenues for infusions of new technology and new ideas about management and operation," says NSF networking chief Stephen S. Wolff.

TEST-TUBE VANILLA: IT TASTES GOOD, AND IT'S CHEAP

Real vanilla—the liquid flavoring extracted from the bean—is expensive stuff, costing about $1,200 a pound. The synthetic vanilla cooked up in chemistry labs and used in many mass-market products is far cheaper, but it tastes flat by comparison. Now, there's a compromise: a cultured form of natural vanilla.

Escagenetics Corp., a biotechnology company in San Carlos, Calif., has won a patent on a process for "growing" vanilla in test tubes. This is the first patent for a flavor developed from so-called plant-tissue culture. Escagenetics also uses the technique to extract taxol, an ovarian-cancer-fighting drug, from the bark of the yew tree. The method relies on the fact that every plant cell can reproduce any of the plant's functions. So with the proper nutrients and conditions, Escagenetics can coax cell cultures to jump straight to the vanilla-producing stage without first growing roots, leaves, and beans. The result, called phytovanilla, isn't quite as rich as the flavoring that beans produce, but it is tastier than artificial vanilla—and it costs only $200 a pound. Unilever PLC has signed an agreement to make and market the phytovanilla.

THESE DIAMONDS AREN'T FOREVER, BUT SCIENCE IS LEARNING FROM THEM

It takes nature aeons to make diamonds, as carbon in the earth crystallizes under intense pressure and heat. But chemists do it in nanoseconds. Using explosives to change the molecular structure of a carbon-metal powder, they produce industrial-grade diamonds used in drill bits and abrasives.

But the explosions are too fast for scientists to know exactly how diamonds are formed. Now, Lawrence Livermore National Laboratory physicists are studying the problem using a 60-foot-long compressed-gas gun—originally designed to simulate the effects of nuclear shock waves. A copper projectile is fired at up to 18,000 mph into a graphite target, compressing it into diamond that disintegrates a moment later. A detector measures the resulting shock wave, providing clues to the changes taking place.

Researchers are a long way from turning coal into diamonds. But understanding how such shock synthesis works could lead to better ways of making industrial diamonds.

SANTIAGO COHEN

HOUDINI OF THE DREXEL SCANDAL

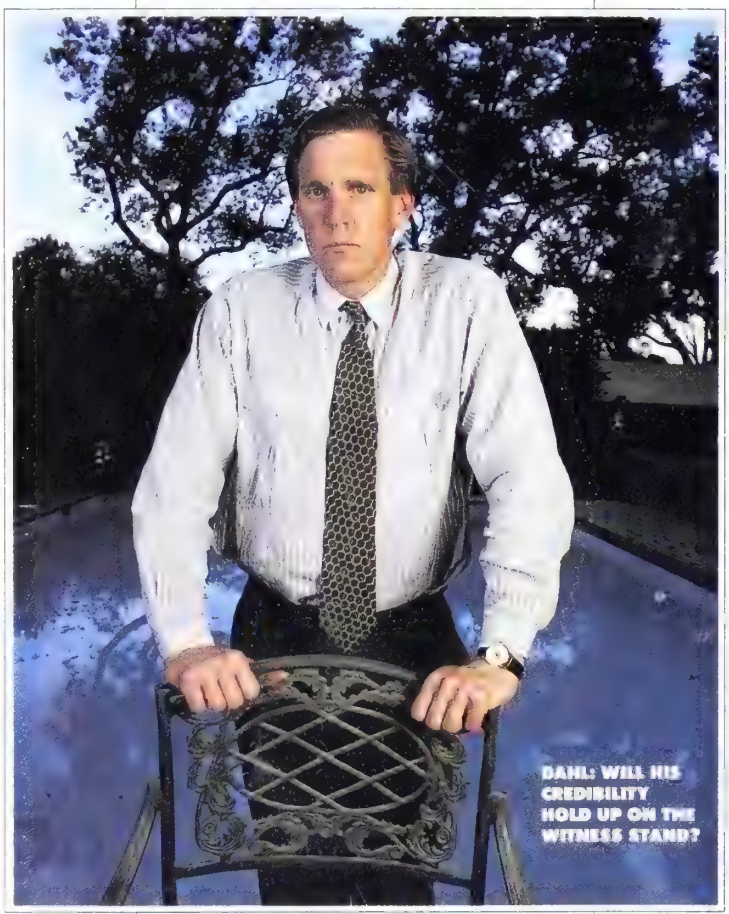
James Dahl could escape with it all—immunity, indemnity, and innocence intact

In the recently published book *Den of Thieves*, James Herbert Dahl is described as "the Robert Redford of the bond market." Dahl, now 38, made $100 million during the 1980s by selling junk bonds for Drexel Burnham Lambert Inc. While his weather-beaten good looks are indeed reminiscent of Redford's, a more apt comparison would be with America's most famous escape artist: James Dahl is the Harry Houdini of the Wall Street insider-trading investigations.

Three years ago, Dahl was a junk-bond salesman in a tight spot. In September, 1988, he got a letter warning of his imminent indictment in the U. S. government's sweeping investigation of Drexel. Instead of indicting Dahl, the Justice Dept. granted him immunity to induce his testimony against his boss, Michael R. Milken. By all accounts, Dahl was the most prolific and highest-paid of Drexel's junk-bond brokers.

Having secured his freedom, Dahl safeguarded his fortune by agreeing last April to cooperate with another arm of the government, the Federal Deposit Insurance Corp., which, on behalf of failed savings and loan associations, is pressing the largest of the multibillion-dollar class-action fraud claims pending against Milken and his minions. Dahl not only was dropped as a defendant in some 20 civil suits but was indemnified by the FDIC against all Drexel-related civil claims.

In the coming months, Dahl is likely to take the stand in several high-stakes trials in which, for the first time since he cut his deal with the FDIC, he will face top-notch defense lawyers bent on impugning his credibility. Although Dahl cannot be prosecuted for anything he did at Drexel, his immunity does not extend to protecting him from charges of giving false testimony. In court, he must be careful not to contradict his past sworn testimony, which is voluminous and, by BUSINESS WEEK's analysis, appears to contain at least one important contradiction (table).



DAHL: WILL HIS CREDIBILITY HOLD UP ON THE WITNESS STAND?

In a 1987 deposition, Dahl asserted that he had acted on his own in trading Staley Continental Inc. stock for Drexel's house account. "I took it upon myself," he said, adding that he had the authority to trade not just in Staley stock but any security. Yet at Milken's pre-sentencing hearing in 1990 before Judge Kimba M. Wood, Dahl testified that he could not execute any trade without getting approval from Milken or another trader. (In her findings, Judge Wood lauded Dahl as a "credible, earnest witness" before sentencing Milken to 10 years in prison.)

In addition, in interviews conducted with BUSINESS WEEK some of Dahl's colleagues disputed certain aspects of his past testimony—especially his assertion that he never saw Drexel's restricted-securities list, which was circulated daily to prevent employees from inadvertently trading on inside information. "I know for a fact he got the list," says someone who worked closely with Dahl and could well be called as a witness in the upcoming trials.

'SCOREKEEPER.' In a four-hour interview with BW conducted poolside at his home in Jacksonville, Fla., Dahl denied that his past testimony is flawed or inconsistent in any way. He insists that he was not privy to the restricted list and that, as he testified in 1990, he needed the approval of Milken or another trader for every trade he executed. Why, then, didn't he say this in his 1987 Staley deposition? Dahl says that he did so off the record. However, the transcript of his deposition notes no departures from the record during the relevant part of his testimony.

Dahl is likely to make his first court appearance of 1992 as a witness against Thomas Spiegel, the former chief executive of Columbia Savings & Loan Assn., which failed earlier this year. Spiegel, who already is fighting civil suits, is expected by sources close to the case to be indicted soon on fraud charges. Dahl

ecialized in S&Ls, and Columbia was
ie of his best customers, along with
vo other equally infamous thrifts: Cen-
rust and Lincoln, both now subjects of
and jury investigations. The FDIC in-
uded Spiegel as a defendant in its civil
it, which accuses him of accepting
ibes and engaging in fraudulent trad-
g with Drexel. Spiegel has denied the
arges. After getting immunity, Dahl
stified that, acting on instructions
om Milken, he had implemented a se-
es of phony, "parking" transactions
th Columbia that generated tax losses
r the thrift and profits for Drexel.
ahl kept a ledger recording these
ades, which spanned five years. "I was
st the scorekeeper," he says now.

Dahl is also likely to take the stand
gainst Milken in a civil trial slated to
gin next Apr. 1. Last fall, lawyers for
nkrupt Drexel filed suit against Mil-
n and his brother, Lowell, seeking the
turn of the $1.1 billion paid them by
e firm from 1985 through 1989. Al-
ough the nominal plaintiff is
rexel, the suit really is being
essed by the firm's creditors,
ief among them the FDIC.
avath, Swaine & Moore, the
gh-powered New York law
m, is handling both Drexel
. the Milkens and the FDIC's
assive suit against Milken.
ne two suits share the same
sic aim: to separate Drexel's
chest ex-employees from their
ealth.

While Milken declines to re-
ond to Dahl on the record, he
s not admitted to any addi-
onal wrongdoing since plead-
g guilty to six felony counts
fore Judge Wood. In fact, his
wyers have denied all of the
arges made in the pending
vil suits and recently filed
unterclaims in Drexel vs. Mil-
n. Alan Dershowitz, Milken's
ad lawyer, has gone to court
eking to invalidate the FDIC's
greement with Dahl on the
rounds that the agency, in ef-
ct, is buying his testimony.

AT BROTHERS. For his part,
ahl has not admitted to in-
olvement in wrongdoing aside
om the Columbia S&L "park-
g" transactions. Early in the
overnment's Drexel probe, he
voked his Fifth Amendment right
gainst self-incrimination before the SEC
nd the grand jury. Dahl says he had
othing to hide but was urged to take
e Fifth by his lawyers. He was repre-
nted by Williams & Connolly, which
so was advising Milken at the time.

Hiring Williams & Connolly was a
istake, Dahl says now. "It was like
aving a big yellow flag in front of the

> Whether the government examined Dahl's S&L dealings before granting him immunity isn't clear

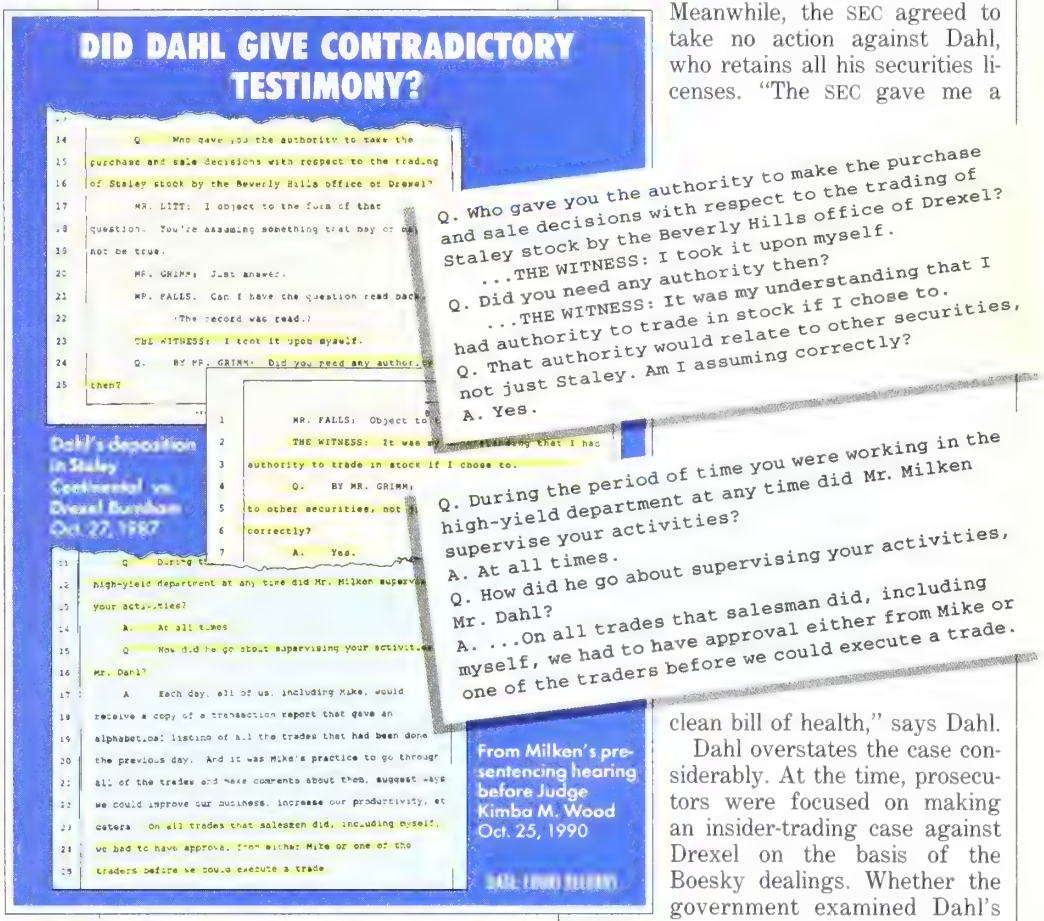
government, saying, 'Look how close I am to Mike,' " he says. Williams & Connolly has denied any conflict of interest in representing both Milken and Dahl, who did not dismiss the firm until after he received a target letter from prosecutors in late 1988. The first thing Dahl did after that was hire someone whom he trusted implicitly—Tallahassee lawyer Stephen M. Andrews. Dahl and Andrews met as fraternity brothers at Florida State University and have remained good friends ever since.

The target letter sent by the SEC to Dahl made no mention of Columbia, focusing instead on a series of suspicious trades between Drexel and confessed felon Ivan F. Boesky—trades that would form the core of the government's case against Milken. Dahl's initials appeared on most of the trading tickets flagged by prosecutors, suggesting that he had been instrumental in perpetrating the fraud. Dahl had done much business with Boesky, but he insisted then, as now, that he had no involvement in the fraudulent Boesky trades. While Dahl couldn't deny that his initials appeared on the tickets, he maintained the handwriting wasn't his but that of his assistant, who had processed transactions done by Milken. But how to prove it?

Dahl and his lawyers assembled the tickets from all the trades he had done with his 10 largest accounts over a six-month period. On virtually every sale that Dahl had handled himself, the ticket was in his own handwriting. Since the Boesky tickets were not in his handwriting, it followed that Dahl hadn't done them—or so argued Andrews in a voluminous submission to the U. S. Attorney.

NO STIGMA. Apparently, prosecutors were convinced Dahl had played no part in the Boesky trades. In any event, Dahl was not indicted. When he resisted signing a cooperation agreement, the U. S. Attorney obtained a compulsion order, which removed his Fifth Amendment protections while giving him immunity. Meanwhile, the SEC agreed to take no action against Dahl, who retains all his securities licenses. "The SEC gave me a clean bill of health," says Dahl.

Dahl overstates the case considerably. At the time, prosecutors were focused on making an insider-trading case against Drexel on the basis of the Boesky dealings. Whether the government examined Dahl's S&L dealings in any detail before granting him immunity isn't certain. Nor is it clear whether the value of Dahl's testimony justified immunity. The news that Dahl had begun talking to the grand jury persuaded other Drexel employees to do likewise. Yet when Milken was indicted in March, 1989, none of the 98 counts in the government's indictment was based on information supplied by



Dahl, according to *Den of Thieves.*

Unlike the typical plea-bargaining witness, say, Dahl obtained immunity without admitting to any wrongdoing. And because he made no agreement with prosecutors, he avoided the stigma attached to being a cooperating witness. It is a point of pride with Dahl that all his subsequent grand jury appearances have been compelled, too.

Nonetheless, last April, Dahl became a cooperating witness when he settled with the FDIC and other civil litigants. Dahl handed over to the FDIC rights to 90% of his interest in dozens of Drexel employee partnerships of indeterminate worth and made what amounted to a downpayment of $5 million. That didn't put much of a dent in his fortune, thought to total about $50 million.

'LOUSY DEAL.' The consensus among Dahl's ex-colleagues—some of whom are now eager to settle with the FDIC themselves—is that he cut himself a sweet deal. But if Dahl is gloating, he is doing it in private. For the record, he blasts his agreement as "a lousy deal. I don't think the FDIC should be entitled to any of my money. I was not an officer or director of Drexel. I was just a salesman."

Dahl is as ambitious a witness as he was a salesman. He not only hopes to be seen as credible but blameless. Aside from the Columbia parking, he admits to no offense, not even to disloyalty. Asked to respond to ex-colleagues who accuse him of betraying Milken, Dahl says: "I feel betrayed by Mike. If he'd exercised better judgment, 11,000 Drexel employees would still have their jobs."

On the other hand, Dahl's agreement with the FDIC doesn't prevent him from denying its basic allegation: that by massively manipulating the junk-bond market, Milken and his inner circle systematically defrauded S&Ls of billions of dollars. "Drexel didn't force these S&Ls to buy bonds," Dahl insists. "The reason why S&Ls lost a lot of money in high-yield bonds was because they were so leveraged and they didn't have the staying power to ride out the down cycle in the market." Milken's lawyers wouldn't have put it any differently.

Dahl, it seems, wants it all: immunity, indemnity, and innocence. As a result, he once again could find himself in a tight spot. He can only go so far—perhaps not far at all—in helping the FDIC make its fraud case without either compromising his protestations of innocence or contradicting past sworn testimony. On the other hand, if the FDIC feels that Dahl is not testifying truthfully or fully, it could seek to abrogate its agreement with him. Either way, the Houdini in Dahl is likely to be tested again in 1992.

By Anthony Bianco in New York

BANKING

REPUBLIC, THE BORING BANK, BREAKS OUT

Ultraconservative and ultraprofitable, it's giving the dice a roll

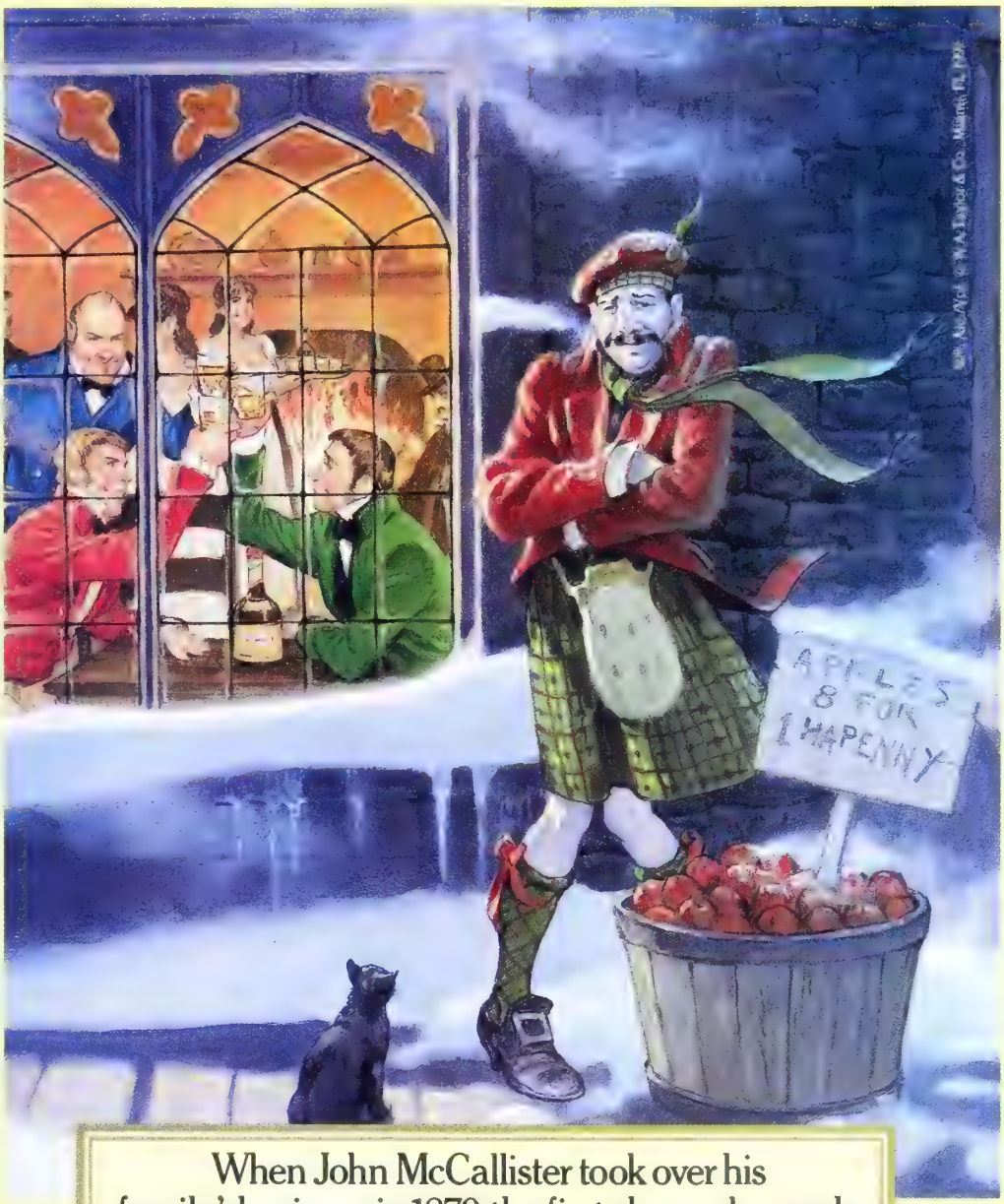
REPUBLIC'S KEIL PLANS TO TINKER WITH THE TRIED AND TRUE

In the middle of an interview in his sleek midtown Manhattan office, Jeffrey C. Keil, the president of Republic New York Corp., pulls out a three-year-old newspaper profile of himself and points to a quote about Republic's strategy that reads suspiciously like a statement he had uttered just moments before. "The reason I saved this was to show you how boring I am," he says with a smile. "I was saying the same things in 1989 that I'm saying three years later. We've got a strategy here. It works. We just try to evolve with it."

Republic itself has been rather boring. During the 1980s, when many large banks were pursuing exciting growth strategies, the $30 billion bank stubbornly and quietly stuck to its ultraconservative way of doing business: providing "private banking" services to mostly affluent, safety-conscious customers, focusing on attracting deposits rather than on making loans, and keeping capital high and overhead low. "Whether you're talking credit quality, liquidity, productivity, or capital strength, they're head and shoulders above most other major banking organizations in the U. S.," says Thomas H. Hanley, a bank analyst with Salomon Brothers Inc.

But now, Republic is becoming a lot less boring. As other financial institutions increasingly try to recruit Republic-type customers, Keil is pursuing a surprisingly venturesome new strategy. Republic has been aggressively increasing its retail deposit base through acquisitions of troubled New York savings banks. And it is seeking to leverage off its reputation for safety by developing a line of new investment products, such as mutual funds and brokerage services. Making all this pay off, though, will not be easy. Banks' track record of selling investment products is spotty at best, and competition in the financial services industry is fierce.

Republic certainly has the wherewithal to take risks. It sits on the biggest cash cushion of all major banks: Capital, adjusted for risk, is more than 14% of its assets, vs. the 4% that many banks are struggling to meet or maintain. Its al-

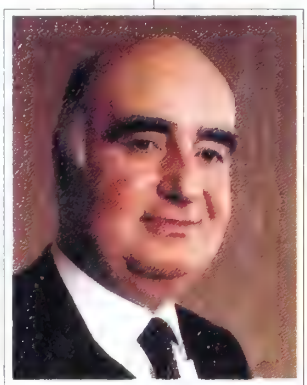


When John McCallister took over his family's business in 1870, the first change he made was to stop serving Drambuie to his clients. A year later, he was freelancing.

Unfortunately, John McCallister lacked his father's business acumen. And his appreciation for Drambuie. No wonder he wasn't a success. Drambuie. A base of 100% aged malt whiskies, uniquely flavored with herbs and wild heather honey. Scottish in origin, distinctive in taste, unchanged since 1745. **Drambuie. The stuff legends are made of.**

most obsessive attention to expenses has its ratio of noninterest expense to total revenue well below that of many of its peers.

All of this has paid off on the bottom line. In third-quarter 1991, return on assets was 0.76%, and return on equity was 14.2%. Among money-center banks, only Bankers Trust Co. and Morgan Guaranty Trust Co. did better.



LEGENDARY FOUNDER SAFRA NOW PLAYS "COACH"

Even with its more aggressive strategy, Republic will remain a haven for individuals whose primary concern is preservation of capital. "Our main aim is to protect depositors' money," says the bank's legendary founder, Edmond J. Safra, in a rare interview. "Even at the price of having a lower profit, I'd rather have that than take chances." It invests depositors' funds in such high-quality securities as U.S. Treasury and agency paper, and debt issued by foreign governments.

DISASTER DOLLARS. "We focus our attention on the 15% to 20% of an individual's wealth that they want to be totally liquid," says Kenneth F. Cooper, chief financial officer at Safra Republic Holdings, Republic's Luxembourg-based international private banking affiliate. "If you're accepting large deposits like we are, and it's rainy-day money or money in case of a political disaster or economic disaster in your country, you're looking for double or triple safety." The typical account has about $500,000 to $1 million. A third of Republic's deposits are from foreign investors, and a significant share is flight capital.

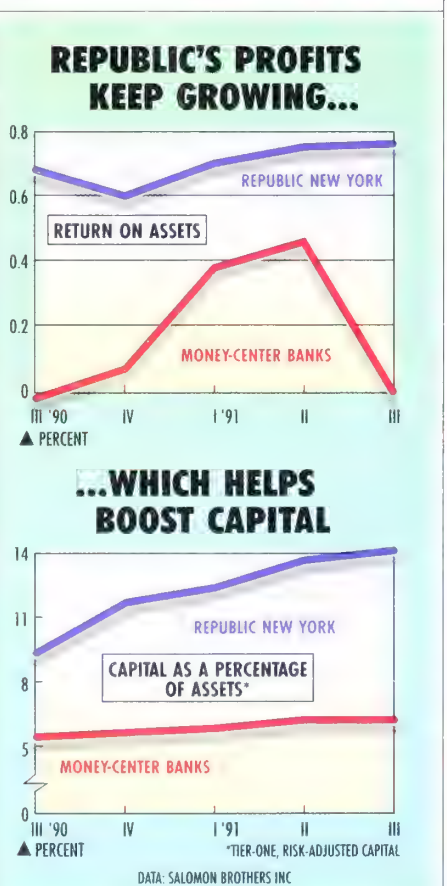
Lending to customers is not a big part of Republic's strategy. "I prefer not to do loans," says Safra. "If you're liberal in lending, you've got to be hurt." The bank's balance sheet has only about 30% of its assets in loans, about half the norm for most money-center banks.

Any exploration of what makes Republic tick leads to Safra, whom Hanley describes as "the brightest person in banking that I have ever met." Low-profile but highly regarded, Safra comes from a line of financiers stretching back to the caravan trade in the Ottoman Empire. In 1983, Safra sold his Geneva-based Trade Development Bank, which specialized in private banking, to American Express Co. for $550 million.

After a rift with AmEx executives, Safra left TDB in 1985. AmEx tried assiduously to keep him out of private banking. The most egregious attempt was its infamous smear campaign: false allegations of links between Safra and Republic to drug smugglers, money launderers, and illicit arms traders. Eventually, AmEx apologized and promised to donate $8 million to charities of Safra's choosing. Safra will not comment on the episode.

International private banking is now the fastest-growing part of Republic. Since the bank launched its Safra Republic Holdings in 1988, client assets have soared from $2 billion to almost $8 billion in 1991 and are now growing close to 20% annually. "Private banking is growing fastest in Europe and growing especially fast in the Far East, where there is a huge market," says Safra. Republic is well-positioned to benefit, with branches in Hong Kong, Japan, and Singapore.

Safra owns 21% of Safra Republic Holdings as well as 29% of Republic New York Corp. His stake in Republic New York is worth $588 million. Keil, who says he speaks with Safra almost every day, compares the financier's role with that of a football coach: "He knows that he's not there on the field, so he doesn't try to execute the plays. But there's no doubt that he decides who the players are and coaches them for most of their careers."



Republic's new game plan, the move to add to its U.S. retail deposit base stems from pressure on its core business. Not only are competitors targeting its customers but low interest rates have squeezed the spread between what Republic pays customers and what it earns on its investments. Taking advantage of some near fire sales of ailing New York savings banks, Republic acquired on the cheap Williamsburgh Savings Bank in 1987 and Manhattan Savings Bank in 1990. It is now bidding for Crossland Savings Bank, which has $6 billion in local market deposits. Republic acknowledges that the deal would be a "difficult digestion" and that the returns from Crossland won't be as good as those from previous acquisitions.

NO HURRY. Republic, nonetheless, is looking for still more deals. "Over the next three to five years, it will be a buyer's market, and they are in the driver's seat," says Hanley. Says Keil: "We think that if we can manage banks in Singapore and London that we ought to be able to manage banks in Florida and California and Texas. And we will, but one step at a time."

Republic is working hard to develop new products and services for its growing customer base. It has filed for a discount brokerage license and will work with Dreyfus Corp. to roll out a line of branded mutual funds in the U.S., which is expected to be launched within six months. "We're not talking about introducing anything that hasn't been done for the last few thousand years, but we're branding it, saying that you can have confidence in it because you're buying it from Republic," says Thomas F. Robards, executive vice-president and treasurer for Republic New York. "It's just like if you buy a certain brand of aspirin, you feel confident because, say, it's Bayer that is delivering."

In a sense, Republic currently resides somewhat uneasily between its past and its future. While Robards compares its services to a packaged-goods product like aspirin, its latest annual report offers another quite different metaphor from Safra's deceased father Jacob E. Safra: "If you choose to sail upon the seas of banking, build your bank as you would your boat, with the strength to sail safely through any storm." Jacob's maxim has certainly helped Republic enjoy remarkable prosperity. But it may take more than sheer strength to carry Republic through a stormy decade of intense financial services battles.

By Suzanne Woolley in New York

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BY GENE G. MARCIAL

LASERDISK, LASERDISK, BURNING BRIGHT?

Laserdisks haven't taken the country by storm, and they aren't likely to catch up anytime soon with the ubiquitous videocassettes, the craze of the home-video market. Still, demand for shares of major laserdisk distributor Image Entertainment has pushed the stock up to 8, about twice its price in August. Image is one of the companies in which Metromedia founder and billionaire John Kluge owns a big stake.

True, Image has been in the red for the past five years. But the company—which distributes some 3,500 movies and music videos on laserdisks through an agreement with such movie makers as Disney, Orion, and Sony—plus an exclusive pact with Fox Video—is finally turning around, says analyst Paul Marsh of Kemper Securities Group.

For the first time, Image is expected to post a profit—in fiscal 1992—of 11¢ a share on projected sales of $58 million. In the year that ended Mar. 30, 1991, Image sold $48 million worth of laserdisks to owners of 439,000 laser players—just 0.5% of the 90 million homes that own television sets. In 1993, Image should earn 48¢ a share on estimated sales of $65 million, figures Marsh. Image's recent private placement of $20 million of secured notes with a major insurance company, says Marsh, will enable Image to pay off a $14 million debt and expand operations.

DEEP POCKETS. Laserdisks resemble a large compact disk but are encoded with both audio and visual information. Sales of laserdisk players have accelerated from 75,000 units in 1987 to 160,000 last year, according to the Electronic Industries Assn., which sees sales this year of 250,000 units. The players now cost $300 to $700, down from $1,000 to $1,500 five years ago. The appeal is growing, notes Marsh, because the "images and sound conveyed by laserdisks are far superior" to those on a VCR. If laserdisks penetrate just 5% of U.S. households, it would mean growth of 1,000% from current market levels.

Marsh sees an average laserdisk household buying 11 disks a year at $35 apiece. That suggests a market of $170 million in 1991. He believes sales will climb to $250 million in 1992 and to $737 million by the end of 1995. Image has 34% of the laserdisk market.

Some big investors speculate that Kluge—who together with partner Stuart Subotnick owns 38.5% of the company—may eventually sell part of the stake to a group that is in the film business. Whispers are that Disney, Paramount Communications, and Pioneer Electronics of Japan are interested in Image. Chairman and CEO Martin Greenwald declined to comment, but says he doesn't rule out a "strategic alliance" with a larger company with deep pockets to enable Image to become a global laserdisk leader.

GENERAL PHYSICS MAY BE SUPERHOT

As the U.S. begins to reduce its nuclear arsenal, some investors see a bonanza for a company called General Physics, a major provider of services to the nuclear industry. General Physics went public in September when parent National Patent Development sold some 60% of its 93% holding in the company. General Physics offers training programs for nuclear and fossil-fuel power plant workers and has provided other services, such as helping the government and commercial clients to improve environmental, health, and safety conditions at 90 of the nation's 112 nuclear plants.

Mark Friedman, an analyst at Goldman Sachs, says the decision to reduce the supply of nuclear weapons "could lead to a new business of training personnel to disassemble nuclear weapons." U.S. government personnel will do the actual job, but General Physics could be a big player in training workers, he notes.

Friedman says the company is "ideally positioned" to benefit from the upgrading of Energy Dept. standards, including the process of cleaning up hazardous waste at nuclear facilities. He figures that in the next 30 years, the Energy Dept., which oversees the U.S. nuclear weapons complex, will spend $200 billion to upgrade plants.

Money manager Barry Feirstein, who runs some $980 million at Equitable Capital Management, is also high on General Physics. He says the company has trained personnel at one of the largest Energy Dept. nuclear plants—the Savannah River site. General Physics also won contracts for 9 of the government's 17 nuclear plants. Feirstein sees General Physics making $1 a share in 1991 and $1.20 in 1992, up from 1990's 78¢. Now at 12, the stock should hit 20 in a year, he says.

WHAT'S MAKING SHORTS GO LONG

Guilford Securities, an investment firm in Chicago, is known in the business as "a den of the shorts." Usually, "we take just one long [buy] position a year," says Mitch Kopin, a portfolio strategist at Guilford. So investors pay attention when the Guilford pros go bullish on a stock.

A "must-buy," says Kopin, is STAAR Surgical, which has "an almost exclusive right" to a $500 million market: the just-emerging "foldable" intraocular lens business. Here's why.

In September, the Food & Drug Administration granted a patent for STAAR's foldable lens, which analysts predict will be used in about 90% of all cataract surgeries. What's appealing about the lens? It requires only a tiny 3.5 millimeter incision for surgeons to insert it in the eye of cataract patients. The procedure using a hard lens requires an incision of 5mm to 11mm.

STAAR has licensed its big competitors—Cooper Cos., Allergan, and Chiron—to distribute the foldable lens in return for a royalty fee of 6% of net revenues. But it is preparing to go into making the lens, which is the more lucrative side of the business. The market for the new lens is expected to grow by 15% to 20% a year. Kopin figures STAAR will be in the black in 1992, after an expected loss in 1991. And in 1993, he sees a net of $1 a share. He thinks the stock, now at 7, will double by early 1993.

ERIC HOFFMANN/BW

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SOFTWARE

ANOTHER YEAR, ANOTHER BITTER LESSON FOR JIM MANZI

Lotus' latest 1-2-3 goof raises tough questions about the future

For Jim Manzi, it's another unwelcome lesson in software-crisis management. Four years ago, with a major new product a year late, the chief executive of Lotus Development Corp. learned how dangerous it is to let programming schedules slip. This year, he's learning how damaging it can be to release a product too soon. The newest version of the 1-2-3 spreadsheet, the first designed for Microsoft Corp.'s hot-selling Windows graphics system, was shipped in August—rife with bugs. A month later, the company had to replace it. Two months after that, on Nov. 21, W. Frank King III—the manager who had brought IBM-style discipline to Lotus' floundering development organization in 1988—was gone.

This year's lesson is that in a fast-moving software market, efficient management is nice, but there's no substitute for top-notch technology. So Manzi has replaced King with techno-jock John Landry, a 44-year-old industry veteran, most recently technology chief at Dun & Bradstreet Software Services Inc. A self-taught programmer, Landry has launched and sold two software startups and is far more steeped in technology than IBM veteran King or Manzi, a former journalist and marketing consultant.

MAINSTAY. Landry's most pressing challenge centers largely on Windows, the Microsoft "environment" that makes a PC look like a Macintosh. PC owners are snapping up the package—8 million have been sold so far—and are looking for new applications such as spreadsheets to go with it. So far, Microsoft's Excel dominates the Windows spreadsheet market, and Borland International Inc.'s QuattroPro for Windows, due out by March, is garnering early kudos from testers. Meanwhile, market researcher International Data Corp. estimates only about 250,000 copies of 1-2-3 for Windows have been sold, one-fourth the volume analysts had projected.

With a weak offering in the Windows market, Lotus could see further erosion of its market share, now at about 55%, down from 75% three years ago. "They've heard footsteps," says Jude Gartland, a senior vice-president at Shearson Lehman Brothers Inc., a Lotus customer. Sales of 1-2-3 for PCs this year are nearly flat, and investors have begun to discount Lotus' ability to fend off Borland and Microsoft. The stock is down to 20 from about 41 in August. "Wall Street is worried there's no quick fix here," says Peter Rogers, an analyst at Robertson Stephens & Co.

Spreadsheets are not only Lotus' mainstay—accounting for 70% of revenues—but they're also critical to its broader strategy. That involves selling a collection of applications programs to improve productivity for workers using PCs on networks. "The direction of the company matches his strengths," Manzi says of Landry, who has developed and sold both mainframe and PC packages. One important consideration is matching wits with Microsoft's oft-quoted CEO, William H. Gates, and the sometimes outrageous Philippe Kahn, president of Borland. Landry says he's ready to take a high profile to explain Lotus' technology strategy and answer the invective rivals hurl at its products. "Lotus never seemed to stand up for itself, never took to the offense," says Landry. "That's a change that's overdue."

TURMOIL. But change—or the promise of change—has become a constant at Lotus. Manzi has shaken up management and shifted strategies frequently in the past five years. In the process, the company bet on some wrong horses, including OS/2, the PC operating system that IBM and Microsoft jointly developed but which Microsoft has now moved away from. Sales of 1-2-3 for OS/2 have been negligible, and the effort left Lotus far behind in developing programs for Windows.

These missteps have created turmoil at Lotus' Cambridge (Mass.) headquarters, where there has been a continuous exodus of top managers in the past year and a half. "No one gets along with Manzi for long periods of time," says Charles Taylor, an analyst at Needham & Co. One departed senior vice-president (table), Stephen J. Crummey, also blames the boss. "At the end of the day, the issue is Jim Manzi," he says.

So far, Manzi seems in no danger of losing his job. In addition to being CEO and president, he's chairman of Lotus' four-man board. And he still has support from some Wall Street analysts. Arieh Coll at Fidelity Investments recommends Lotus now as a bargain. Selling at nine times projected 1992 earnings, it's "more like a steel company" than a profitable company in a hot-growth industry, he says. Still, he notes, Lotus' projected 20% revenue growth, to $820 million this year, will lag behind the industry's 30% growth. And he expects earnings of $1.43 a share—less than in 1987. If that doesn't improve, Manzi may be in for yet another lesson.

By Gary McWilliams in Boston, with Evan I. Schwartz in New York

MANZI: NO QUICK FIX?

EXECUTIVE EXODUS

The following Lotus officers have left the company over the past 18 months:

EDWARD BELOVE
VP research & development

DONALD CASEY
VP spreadsheets

STEPHEN CRUMMEY
Sr. VP international business

WILLIAM DRUMMEY
VP North American sales

FRANK INGARI
VP PC spreadsheets

W. FRANK KING III
Sr. VP software business

JAMES MEEHAN
VP international business

FRANKLIN MOSS
VP consulting services

KELSEY SELANDER
VP marketing communications

DATA: COMPANY REPORTS

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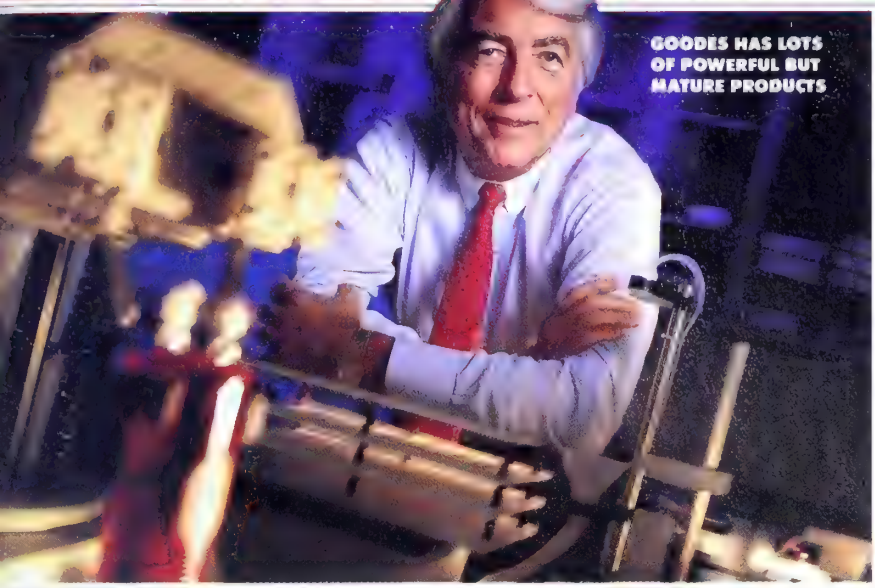

GOODES HAS LOTS OF POWERFUL BUT MATURE PRODUCTS

RATEGIES

CURING WARNER-LAMBERT —BEFORE IT GETS SICK

ew CEO Melvin Goodes fears for the future, so he's moving now

Melvin R. Goodes is one determined soul. Warner-Lambert Co.'s new chairman and chief ecutive officer is a golf nut with a 10 ndicap, and even Arctic blasts don't eep him off the fairways. "I've teed off hen it's 15 degrees out," he says. "It's othing to me. I'm Canadian."

Goodes is proving to be a pretty tough stomer off the links, too. Just three onths after replacing retiring Chairan Joseph D. Williams, the 26-year mpany veteran stunned employees in rly October by unveiling plans to elimate 2,700 jobs, or 8% his total work force. oodes, 56, also anounced a reorganiation of Warnerambert's worldwide anagerial ranks along usiness lines. And he's lding its various busiesses into two core roups—pharmaceutils and consumer prodcts—and refocusing arketing efforts priarily on North Ameri-, Europe, and Japan. Strangely, Goodes's pheaval comes at a mpany that has delivered smart 15% to 20% annual earnings growth since 1985. And had it not been for the restructuring charges, Warner-Lambert would have posted a 15% earnings gain in 1991. But Goodes sees trouble looming. Recession and widespread discounting have begun slowing the growth of such powerhouse Warner-Lambert brands as Listerine mouthwash and Schick razors. Also, its blockbuster drug Lopid, a cholesterol reducer, goes off patent in early 1993. At that time, lower-priced generic offerings will cut into Lopid's $450 million in annual sales.

More worrisome, though, is the future of Cognex, a drug that Warner-Lambert is developing to combat the effects of Alzheimer's disease. Cognex once looked like the company's next big cash-spinner. But in mid-March, the Food & Drug Administration turned down the company's application for approval of Cognex, requesting more testing. Now, the drug won't hit the market until late 1993—if ever. The ruling "was a real body blow," says independent industry analyst Hemant K. Shah.

PINK SLIPS. Goodes believes his belt-tightening, which should save $1 billion in all through 1998, will help the company get its drug-development efforts crackling. "He's taking these actions to regain focus and continue the momentum of profitability," says former Warner-Lambert executive David W. Johnson, chief executive officer at Campbell Soup Co. Perhaps. But in 1991, the downsizing will result in a $524 million aftertax charge that will drive down the company's profits 92.6%, to $36 million, on $5.14 billion in sales, says Shah.

But it will take more than pink slips and plant closings to get Warner-Lambert through the leaner times ahead. Goodes must figure out how to squeeze greater profits out of Warner-Lambert's powerful, though often mature, over-the-counter products such as Dentyne gum and Rolaids antacids. Many of these brands face fierce competition. In fact, Warner-Lambert's $1 billion chewing-gum business, which also includes Chiclets and Trident, lost its No. 1 spot to Wm. Wrigley Jr. Co. earlier this year.

Collectively, these nonprescription products contribute 67% of total revenues and about 70% of operating profits. But the margins on some of these businesses now run as low as 20%, vs. 36% or so in Warner-Lambert's drug business. Small wonder the company's overall gross profit margin is just 10%—vs. the 16% average at other drug companies.

To boost his fortunes, Goodes is hoping for healthier consumer-goods profits overseas. Indeed, the company virtually created the market for mouthwash in Japan when it introduced its Listerine brand in 1984. Today, it commands 31% of the Japanese market.

To make sure there are more such success stories, Goodes is putting worldwide management through a sweep-

WARNER-LAMBERT FACES GROWTH PROBLEMS...

A blockbuster is going off patent: The patent on Lopid, a $450 million cholesterol reducer, will expire in January, 1993

A major new drug is held up: The Food & Drug Administration has asked for further testing of Cognex, an Alzheimer's treatment

Consumer products are slowing: Worldwide sales of Warner-Lambert consumer products decreased 5% in the third quarter of 1991

...SO IT'S RESTRUCTURING TO CUT COSTS

In a $524 million (aftertax) overhaul, Warner-Lambert will:

1. Cut 2,700 jobs, or 8% of the work force
2. Fold several businesses into two—pharmaceuticals and consumer products—and reorganize management ranks along product lines
3. Consolidate overseas manufacturing into fewer plants

DATA: BW, COMPANY REPORTS

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ing restructuring. Under the old system, managers were responsible for all brands in their country, from Certs to the epilepsy drug Dilantin. Now organized along product lines, managers will have the opportunity to learn in depth about their particular markets. So if their brand starts to flag, there will be nowhere to hide.

HEDGED BETS. Goodes also hopes to create more over-the-counter products from Warner-Lambert's vast array of prescription drugs. Consider that its reformulated antihistamine Benadryl has seen annual sales grow sixfold, to $115 million, since being introduced into the nonprescription market back in 1985.

Another challenge for Goodes will be reenergizing Warner-Lambert's pharmaceutical business, which accounts for 30% of operating profits. Trouble is, Cognex is on hold. So far, it's unclear whether the drug has much of an impact on Alzheimer's—and results from the new tests won't be ready until late 1992. What's more, many of Warner-Lambert's new drugs, such as the antihypertensive Accupril and the oral contraceptive Estrostep, are entering crowded markets.

To hedge his bets, Goodes has boosted R&D spending on drug development this year by 12%, to $340 million. Of course that's small compared with rival Merck & Co.'s $1 billion budget. And there's the rub: With the cost of new-drug development skyrocketing and the industry rapidly consolidating, can Warner-Lambert afford to go it alone? "Warner-Lambert is not going to be bought," Goodes says adamantly. Tough talk. But what would you expect from a guy who enjoys tooling around a golf course in January?

By Joseph Weber in Morris Plains, N.J.

STRATEGIES

A DARE IN THE DESERT: 5,500 RETIREMENT HOMES

Del Webb's Phil Dion might just pull off a coup near Palm Springs

Philip J. Dion sees gold where most just see sand. Staring at a photo of the California desert mounted on the wall of his Phoenix headquarters, Del Webb Corp.'s chief executive envisages thousands of houses filled with America's burgeoning ranks of retirees.

Fanciful? Perhaps. But in recent years, successful retirement communities in Arizona and Nevada have helped pull the $228 million real estate company out of a near-fatal tailspin. Now, the 46-year-old chief faces his biggest test yet. Despite the worst housing market California has known in years, Dion is planning a massive retirement-home project just outside Palm Springs.

GAMBLING LOSSES. Dion is used to long odds. For most of the 1980s, disastrous investments in casinos and hotels in Las Vegas and in Atlantic City dragged down the builder of the Flamingo Hotel—the first casino on the Vegas Strip, once owned by gangster Bugsy Siegel. In 1988 and 1989, Del Webb lost $100 million on sales of $259 million. So Dion, then a six-year veteran, decided to unload the casinos and focus on retirement homes.

That pulled Del Webb out of its slide. In 1990, it earned $15 million on revenues of $242 million, up 72%. But that growth has now stalled. In fiscal 1991, ended in June, operating profits fell 18%, to $12 million, while sales sank 6%. And in the first quarter, the real estate slump sent operating profits tumbling 32%.

Still, Dion believes his new project, Sun City Palm Springs, isn't just castles in Spain. The company has spent $40 million on land and raised $32 million of new equity to help develop the project near the celebrity-studded resort town. And despite the real estate funk, investors aren't flinching: Del Webb's stock has jumped 150%, to 14, since January.

That's an awful lot of support for a development that has yet to be built. On Oct. 23, Del Webb broke ground on the project, which will include up to 5,500 units on 1,574 acres of desert. In January, it will start selling houses—at an average of $160,000 a pop—to be completed next fall. Sun City will be pitched as a serene world of golf, bowling, and crafts. "We are not a homebuilder," says Dion. "We sell a lifestyle."

But it may be tough to find enough people to live that lifestyle. In Palm Springs, where Del Webb hopes to sell 800 houses a year, total new-home sales this year are expected to be 1,775—less than half the 1989 peak—according to Meyers Group, a Los Angeles real estate consultant. And many retirees may be reluctant to sell their homes—and buy Del Webb's new units—in a soft market.

Also, retired folk may bypass Palm Springs for Del Webb's Phoenix and Las Vegas communities, where similar houses sell for about one-third less. "Del Webb is going to be competing against itself," says Eric Brown, an analyst with Kennedy-Wilson, a real estate marketing firm based in Los Angeles.

RISK-TAKER. Again, Dion isn't worried. Retirees are plentiful and don't act the way other home buyers do, he argues. They may be more willing to sell their homes because the recent slump has wiped out only a fraction of their gains after a decades-long real estate boom.

Launching a huge development in the depths of a recession takes nerve—but such risks have paid off for Dion before. When Phoenix housing sales plummeted 24% in 1988, Del Webb's sales in the area were off by only 11%. And by moving into the hot Las Vegas market, the company has grown at a time when many homebuilders around the country are going belly-up. But as the Del Webb chief pushes into the California desert, he can only hope that the gold he sees there is not a mirage.

By Eric Schine in Phoenix

"WE SELL LIFESTYLE": DION USES A SPORTY SUMMER-CAMP APPROACH

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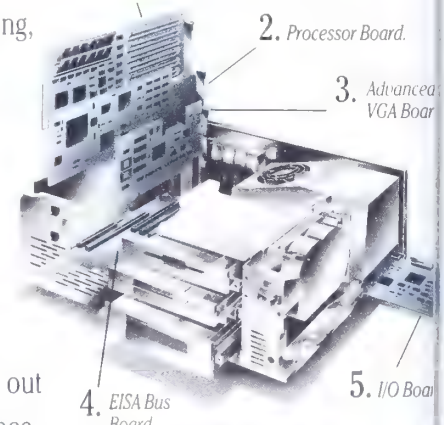

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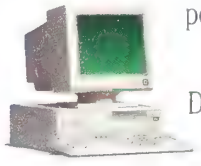

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EDSEL FORD: 'I WANT TO BE JUDGED ON MY ABILITY'

His new job at the credit arm is something of a test drive—to see if he has the stuff to run Ford

Throughout his career at Ford Motor Co., Edsel B. Ford II has delighted in tweaking archrival General Motors Corp. When he began a two-year stint running Ford of Australia, GM dealers there sent him a pair of boxing gloves. He sent back a towel, suitable for throwing in. Later, while at Harvard business school's three-month management development program, his class toured GM's Framingham (Mass.) assembly plant. Edsel showed up for the trip wearing a Ford racing team jacket.

Ford isn't doing much clowning these days. Since May, he has been president and chief operating officer of Ford Motor Credit Co., the carmaker's $6.9 billion-a-year finance arm. It's unfamiliar territory for a man who spent nearly two decades in car sales and marketing, and he's the first to admit that the transition hasn't been easy. "I'm not comfortable yet," says Ford, 42. "It's going to take some more time for me to really understand the basics of Ford Credit."

BOARD GAME. He had better get going. One day in the not-so-distant future, Edsel could become the first family member to run Ford since his father, the late Henry Ford II, retired in 1980. But even if the family, with 40% of the company's voting stock, pushed for his promotion to the corner office, Edsel knows he needs demonstrable finance skills—not only to run Ford but to convince others he is qualified for the post. Now, facing the most important challenge of his career, America's best-known industrial scion is eager to prove he's, well, no Edsel. "I work hard, and I don't expect favors," he says. "I want to be an average employee. I want to be judged on my ability to do my job."

How about his well-publicized 1989 dispute with then Ford Chairman Donald E. Petersen? Ford made headlines by complaining about what he considered his limited role on the board of directors. He insists it was not an attempt to capitalize on his family connections, that he was simply asking to be treated "as a regular director—nothing more, nothing less." Petersen says he fully intended to give Edsel and his cousin, William Clay Ford Jr., more clout: "It was only a matter of timing." Since then, both Fords have joined the executive and finance committees, where they are active members. Last year, Edsel made a presentation on global sales, and next year, he aims to make one for Ford Credit.

Assuming he does well at Credit, Edsel could have a shot at the chairman's job in around nine years. Current Chairman Harold A. Poling is set to retire in 1993, and the front-runner as his successor is Allan D. Gilmour, president of Ford Automotive Group. Edsel could certainly be a candidate when Gilmour, now 57, steps down. Among other executives vying for the top job, Ford may face stiff competition from his brainy, 34-year-old Cousin Bill (page 102). But the difference in their ages also could allow Edsel and then Bill to hold the top spot.

Edsel prefers not to talk about how he would run the company—"that would be inappropriate," he says. But in speeches, a common theme is Ford's need for a "global state of mind" in its marketing efforts. He imagines 50% of future growth will come from new and emerging markets such as Eastern Europe, India, and elsewhere in Asia.

As a manager, Ford could not be much more different from his autocratic father. He likes to build a consensus on important decisions and is anything but arbitrary. Dealers are among Ford's most vocal supporters, in part because he has been accessible to them over the years. "There's always great respect for a marketing manager who listens to the dealers, because dealers feel they recognize trends quicker than the manufacturer," says William Ritchie, forme president of the Lincoln-Mercury Deale Council.

Others admire Ford's wide-ranging knowledge of cars and the people wh buy them. At Lincoln-Mercury, h sought to attract younger buyers, cham pioning the sporty, Australian-built Ca pri. It continues to bring in younge drivers. Earlier, Ford leaned on manu facturing to make more stylized whee covers for the Lynx RX-5 when a short age of the covers limited supplies of on of his most youth-oriented models.

The biggest complaint about Edsel a Ford is that his career has lacke

EDSEL'S RIDE AT FORD

BORN Dec. 27, 1948, son of Henry Ford II

EDUCATION Babson College, 1973

CAREER HIGHLIGHTS

1974 Joined Ford Motor as a product-planning analyst

1978-80 Named assistant managing director, Ford Motor of Australia. Responsible for car product-planning, sales and marketing, and truck operations

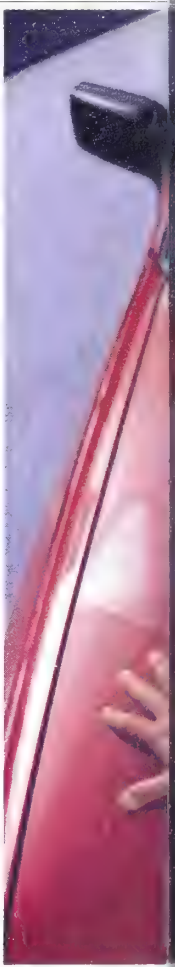
1981-87 Rose through various marketing and sales jobs with the Ford and Lincoln-Mercury Divs.

1988 Elected to Ford Motor's board of directors

1989 Named executive director of marketing staff

1991 Chosen as president and COO of Ford Credit

DATA: FORD MOTOR CO.



eadth. Now, after 17 years, he's get-
g a taste of finance. But he hasn't
d a day of manufacturing experience.
ould he have planned his career differ-
tly? He doesn't think so. "No one ever
d to me, 'If you want to be at the top
the company, Edsel, you had better
t a job in manufacturing.' "
Others believe Ford has had a shel-
ed career. "There are too many safe-
ards built into every position, in the
m of advisers and fall guys," says
gene E. Jennings, professor emeritus
Michigan State University's Eli Broad
llege of Business Administration. "So
doesn't have the humility of someone
o has been decked, picked himself up,
d put his career back together."

ONCO BOOSTER. That's not entirely
ie. As a marketing and advertising
nager for the Ford Div. in the bleak
rly 1980s, "failure was a month-to-
nth experience," recalls a former col-
gue. "Sales objectives weren't being
t with any regularity." In response,
sel liked to stress new products that
dded value" to existing lines, such as
popular Eddie Bauer edition Bronco
with special interiors and color
hemes from the catalog company. He
o gave Mustang sales a lift by being
early supporter of the car's first con-
rtibles in many years.

But it's fair to say that his new job, running Ford Credit, is a safe one. The unit is one of the few bright spots at Ford. In the first nine months of 1991, it earned a record $585 million, while the parent company was losing $1.8 billion. Edsel also has a strong mentor in Ford Credit Chairman William E. Odom, a finance veteran with 25 years' experience. Still, Ford doesn't plan on remaining in Odom's protective shadow. "I don't want people to shelter me from the hard decisions," he says. "I remind them that I can't learn if I'm sheltered."

> After years in marketing, Ford is now getting a taste of finance, but he still lacks manufacturing experience

Associates agree that Ford doesn't assert his birthright. "He doesn't expect anybody to carry his bags," says Stephen G. Lyons, general marketing manager of the Lincoln-Mercury Div. When he and Edsel worked at the Ford Div., shuttling between downtown Detroit and Dearborn, Edsel's favorite lunch spot was a McDonald's where they could grab a bite between the two offices. "If I had all his money, I'm not sure I would work as hard as he does," Lyons admits.

Still, executives tread very lightly when the subject turns to Edsel. When BUSINESS WEEK asked one former boss to elaborate on some comments he had made earlier, the Ford public affairs staff advised him against the interview. Almost every employee contacted for this article, even those who had nothing but praise for Ford, asked for anonymity. One senior manager's explanation: "I'm not independently wealthy."

Ford, whose shares in the company are worth $27.9 million, recognizes that he can never be an average Joe. "Being a member of the Ford family in Detroit, you're on duty 24 hours a day," he says. "And you just learn to deal with that."

CAR LOVER. Awkward as it can be, Ford has never wanted to work anywhere but the family company. One of Henry II's three children, and the only son, he attended Babson College, a small Massachusetts school founded in 1919 to train young men to take over their family's businesses. An indifferent student, he took five years to graduate. But he was hardly indifferent about cars. On his first date with Cynthia Neskow, they went to the Boston auto show. When they were married in 1974, race-car driver Jackie Stewart was an usher. Today, their garage holds a 1992 Mercury Sable, a 1961 Jaguar Mark II, a 1974 Ferrari Daytona Spyder, a 1976 German Capri, and a 1991 Ford Explorer, which replaced a Range Rover.

Unlike his father, a jet-setter who left Edsel in the care of a full-time nanny, Ford is a family man all the way. On Sundays, he likes to take his three sons to Detroit Lions games—no business colleagues allowed. All but forsaking the social whirl, he prefers "his own kids' hockey games at these dumpy ice arenas," notes Charlotte Craig, former society columnist for the *Detroit Free Press*. Edsel's closest brush with local controversy came four years ago, when he bought a home in Grosse Pointe Farms and, over the protests of his neighbors, razed the house to build a bigger one.

Though generally easygoing and personable, Ford's temper flares when he feels he has been wronged. While in Australia, for instance, he played a key role in producing the Falcon XD, a car designed

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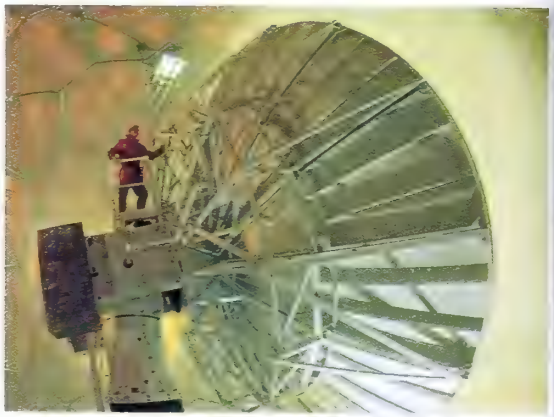

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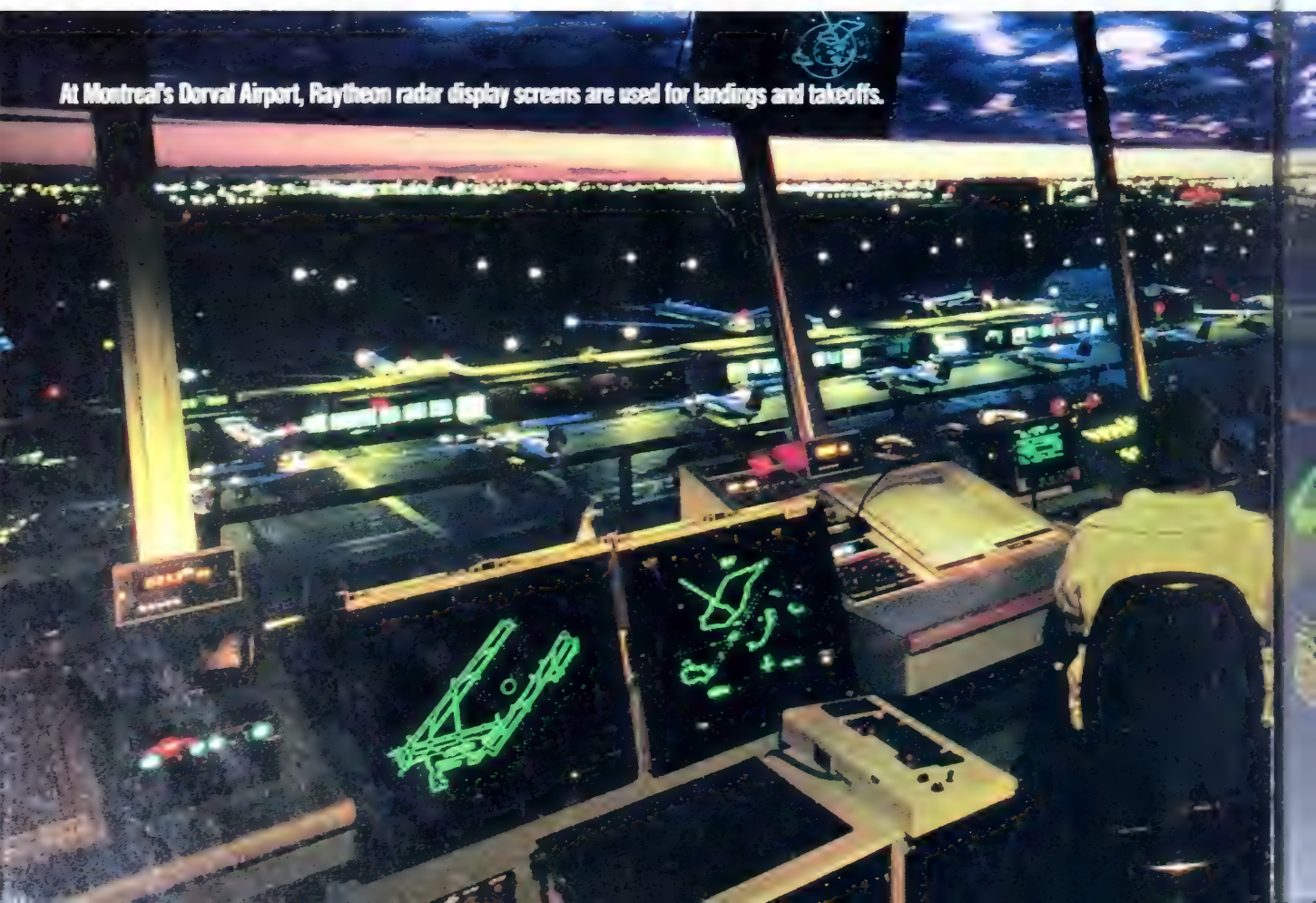

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and built almost entirely Down Under. It was a sales success and the leading candidate for Australian Car of the Year honors in 1980. The Australian car magazine *Wheels*, however, put a lemon on its cover and said no car deserved to win. Infuriated, and unconvinced by the editors' explanation, Ford ran a full-page ad in *Wheels* showing a bunch of lemons emblazoned with the name of every car sold in Australia. "At least we are in good company," read the caption. "I don't think I've ever been so mad in my entire career," he says, his anger mounting as he recounts the tale. "It was a cheap shot."

Ford's most telling swipe against his friends at GM came in the fall of 1985. As Lincoln-Mercury's general marketing manager, he approved a television ad in which a valet repeatedly confused Buicks and Cadillacs, a jibe at the look-alike designs on GM's newly downsized cars. The ad eventually helped to launch Lincoln-Mercury on a market-share surge. But Ford Motor had avoided challenging its much larger rival for years, and the proposed ad was quite controversial within the company. Edsel fought hard for the ad, even meeting with Chairman Petersen about it. "I'm extremely proud of that ad," Ford says.

At Ford Credit, he's grappling with a new species of goals and projects. One objective is boosting U. S. market share currently around 38% of all new cars and trucks Ford sells. In November, he began spearheading a push by Ford Credit into Eastern Europe. He's also spending a lot of time chatting up dealers—the people who move Ford Credit's product. Most important, Ford is trying to get up to speed in the financial world. "It has been a very, very steep learning curve for me," he admits. If he's going to run the company one day, it's a curve he'll simply have to negotiate.

By James B. Treece in Detroit

EDSEL ISN'T THE ONLY FORD IN THE RACE

While running Ford of Switzerland in the mid-1980s, William Clay Ford Jr. had to make do without many of the comforts of his Michigan home. But he wasn't going to let a few thousand miles stand between him and his beloved Detroit Lions, the football team owned by his dad. Every Sunday at game time, Ford would call a relative back in Detroit, who in turn would place the phone next to the radio so that Ford could hear the play-by-play.

Ford, 34, shows the same kind of devotion to that other family business, Ford Motor Co. When he was made manager of heavy-truck engineering and manufacturing in 1989, he even went to truck-driving school and got his heavy-truck license. "I felt I needed a marketable skill to fall back on," he jokes.

Bill Ford, as he likes to be known, is clearly on the fast track. His latest title is executive director of business strategy at Ford Automotive Group in Dearborn, Mich. Among other responsibilities, he reviews global strategic alliances, such as Ford's relationship with its 25%-owned affiliate Mazda Motor Corp. He's also one of two Fords on the board of directors—the other being Cousin Edsel. Reluctant to speak up at first, Bill now serves on the executive and finance committees. Along with Edsel, he has a real shot at running the whole company one day.

But the two cousins couldn't be more different. Bill is the more effusive, and most view him as the more intellectual: While Edsel struggled in college, Bill graduated from Princeton University with a degree in history and then earned a master's of science in management from Massachusetts Institute of Technology. Married, with three children, Bill lives in Grosse Pointe. Apart from collecting Civil War manuscripts, his chief diversion is the Lions organization, of which he is treasurer.

Bill has had a broader range of Ford jobs than his older cousin, who until recently was strictly in marketing and sales. "Billy's breadth of background, enthusiasm for taking on new things geographically, and willingness to take on assignments early in his career are going to pay off," says one senior executive. "Of the two, as time passes, Billy will turn out to be stronger."

NO PETER PAN. On the other hand, Bill has not spent as much time in the spotlight as Edsel. That may have something to do with Bill's father, who never generated as much attention as Edsel's dad, former Chairman Henry Ford II. Whatever the reason, Bill's public persona and his skills in handling people are not as smooth as Edsel's, some colleagues say. He's not a car enthusiast like his cousin. And above all, he's just younger.

But you don't have to tell him that. Having been referred to as "one of the Ford kids" for all his life, "I have to admit that I'm impatient to grow up," he recently told a gathering of advertising executives.

In his new job, he'll have plenty of opportunity to show just how grown-up he has become.

By James B. Treece in Detroit

'BILL' CLIMBS THE LADDER

BORN May 3, 1957, son of William Ford

CAREER HIGHLIGHTS

1979 Joined Ford as a product-planning analyst

1982–88 Various jobs in sales, marketing, finance, international operations, and labor relations

1988 Elected to board of directors

1989 Chosen as manager of heavy-truck engineering and manufacturing at Ford Truck Operations

1991 Named executive director of business strategy, Ford Automotive Group

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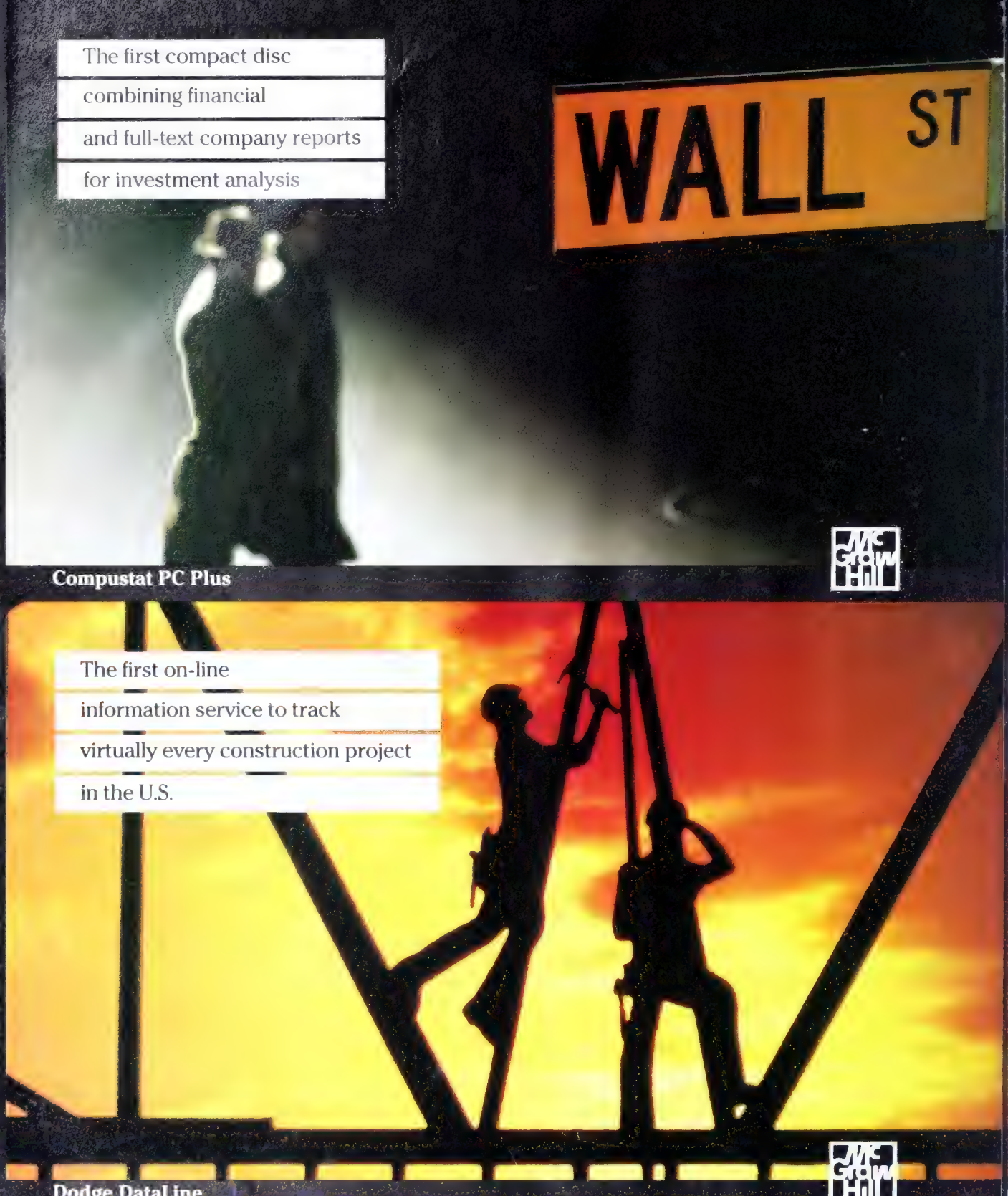

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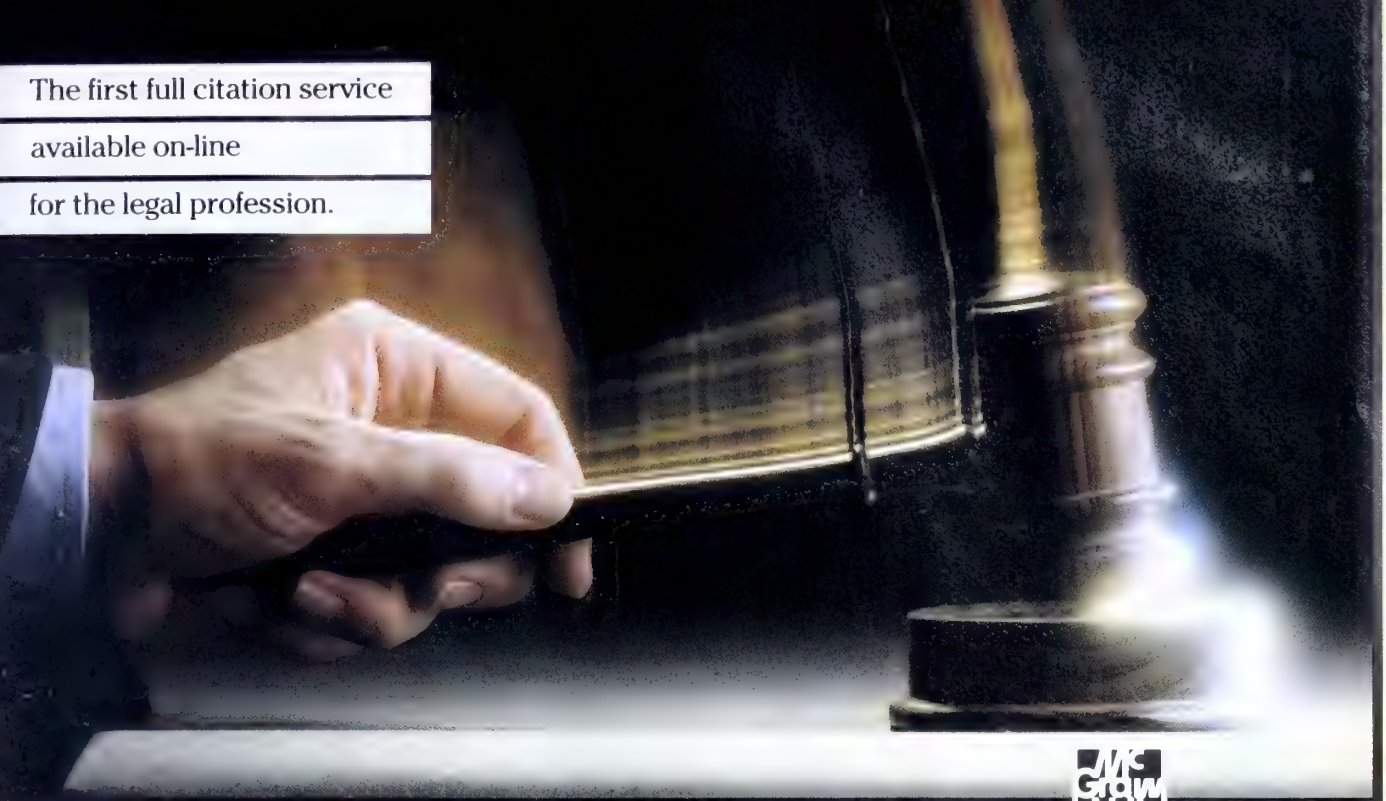

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Finances

FIRST THINGS FIRST: A LAST WILL AND TESTAMENT

When Chase Manhattan Bank Vice-President Tamara Telesko counsels her private banking clients about estate planning, she encounters little resistance to complex trust arrangements or joint-tenant property ownership. "But start talking about the need for a will, and people shy away," she says. "Some won't even think about one until they're hit by the death of a close friend."

It's a common mistake—60% of adults die without a will. But if you don't have one, your assets may end up in the hands of someone other than the people you intended. That alone should be enough to counter the typical excuses people offer for putting off the chore.

LIVING TRUST. Some fear the cost, even though a routine will runs only a few hundred dollars, and the fee for even a sizable estate isn't apt to be more than $2,500. More sophisticated procrastinators may cite the arguments in such books as Norman Dacey's longtime best-seller, *How to Avoid Probate!* or a recent paperback, *Stop Probate Now!* by financial consultants Warrick Graves and Joseph Leff.

Such books contend that the expenses of probate, which is when a court validates a will's legality, can eat up a big chunk of your assets—4% to 6% of a large estate, more on a small one. They suggest transferring property through a revocable living trust instead. While you're alive, you place stocks, real estate, and other assets in the trust. Also, as a trustee or co-trustee, you manage the assets. And because you've named yourself beneficiary of the trust proceeds, you can distribute them to yourself. At your death, the assets in the trust pass to one or more people you have named as beneficiaries, without going through probate.

"Passing on property with a living trust has become the biggest competition to doing it through a will," says lawyer Maurice Spanbock, senio

ner at Carro, Spanbock, ter & Cuiffo in New York. not everything you own fe will have been placed in t at the time of your h, he points out. So you need a will—one that in- es what's known as a r-over clause. "Basically, ates: 'Everything I own at time of my death I be- ath to the successor trust- ' says Spanbock. Usually, 's your spouse, lawyer, ker, or another person doles out the assets.

anbock believes people in 40s or 50s could err if set up a living trust pri- ily to avoid probate ex- es. For one thing, the s of preparing the docu- ts, registering every asset ne trust's name, and hav- a bank or other trustee inister it over the years equal or surpass probate . Where probate lawyers charged a percentage of gross estate equivalent to executor's fee (1% to 3%), t now bill on a per-hour s. "But costs aside," nbock says, "middle-aged le who set up trusts have keep modifying the ar- gement every time their ings change. Over 20 or ears, it can amount to a f attention and work."

RDIAN ANGEL. It's also a d bet that a trustee re- nsible for administering ey and property might wish to be saddled with ersing prized but relative- vorthless furniture, cars, letters, and other items of imental value. A will is simpler way of taking of that, says Stanley tbard, director of person- inancial services at Price terhouse in New York. don't pay for a lawyer's to detail who gets what he will, he advises. In- d, leave the items to your se or another trusted per- who has been provided a letter of instruction.

ne of the most important ures that distinguishes a from a trust and other te-planning documents is it concerns people, not ey. A key role is to state it is you want appointed as legal guardian for your children if they become orphaned. Frequently, two guardians are named—one to raise and educate the kids, another to look after their financial interests.

Telesko says couples should settle the question of guardianship before they even start to discuss who gets what. "Sometimes the husband will offhandedly name 'my sister and her husband' as guardian, and the wife will agree. She realizes only later that if the sister dies, the hated brother-in-law will be in charge," Telesko says. Once, she recalls, a couple refused to sign their wills because they couldn't agree on a guardian. That's a thorny issue for many couples, but it's best to compromise, if only to complete the will. The question of guardianship can always be settled, and the will amended, a little later on.

Whatever your will says, the statements should be clear and direct. Never leave room for doubt about your intentions, says Albert Podell, a New York lawyer who litigates wills. If you decide to disinherit someone, state your exact reasons for doing so. Don't merely leave the person out of the will. It can be challenged on the ground that you made an oversight. And saying "I leave nothing to my son John" isn't enough, either. He might successfully contest the will by claiming you were unduly influenced by other heirs.

The chance of error rules out a do-it-yourself approach to will-making. If any part of the document is incorrect, "the entire will can be invalidated," says Stephen Kornreich, a New York attorney who specializes in will preparation. "Then the state's laws of intestacy take over, as if you had died without a will."

Computer software or books of fill-in-the-blanks legal forms sell for less than $100 but could cost your heirs much more. For instance, your homemade document may not be valid everywhere. And you may run into problems if you don't realize that certain states, such as Louisiana, Maine, and New Hampshire, require three witnesses instead of two. (For safety, always have three people witness your signature, in the event you move to or buy real estate in a three-witness state.) Procedures must be followed exactly, too: If you sign your will first and then go next door to have your neighbor sign as a witness, a challenge could be raised on the ground that no one actually saw you put pen to paper.

PREVIEW TIME. Writing a paragraph that disinherits your spouse would also be grounds for declaring a will invalid. Depending upon where you live, he or she is entitled to one-quarter or one-half of your estate, no matter what your wishes are.

To avoid a contest or confusion, it's a good idea to discuss any contemplated bequests with your executor and, in some cases, with your heirs. Suppose that you decide to leave your house to two children—raising the possibility of a battle over who gets to live in it. Your will can instruct the executor to sell the house within a set period and divide the proceeds of the sale equally.

In a survey of potential heirs by Neuberger & Berman, a New York investment management firm, 58% thought prior knowledge of an inheritance's details would "avoid conflict and controversy later." Nearly two-thirds said they had already discussed their wills with family members, or planned to—as soon as they got around to drawing one up. *Don Dunn*

WHEN IT'S TIME TO REVIEW YOUR WILL

- You move to another state, which might have different estate-tax laws that affect your plans
- Your family changes through marriage, divorce, the birth of a child, or the death of a prospective heir
- Your life insurance, property ownership, or employee benefits change
- The person you name as executor, guardian, or trustee is unwilling or unable to serve in that capacity

DATA: BW

WHERE THERE'S A WILL, THERE SHOULD ALSO BE A...

LIVING WILL

The value of your estate can be greatly reduced if you require extraordinary, costly medical measures to extend your life. With a living will, you can express your wish to dispense with life-support procedures in cases of terminal illness, prolonged coma, or serious incapacitation. A lawyer can advise you on your state's requirements, such as how many witnesses you need and whether the statement must be notarized. You can also obtain information and forms from Choice in Dying, 250 West 57th St., New York, N. Y. 10107.

DURABLE POWER OF ATTORNEY

This document is designed to protect you in case you become incapacitated or are declared incompetent to handle your financial affairs. It lets you name a representative to act for you, instead of relying on a court to appoint a conservator or guardian. The person who holds your durable power of attorney should be someone you trust implicitly. Upon recovery, you regain full control of your affairs. Should you die, the validity of any power of attorney ends.

DATA: BW

Electronics

THE LOWDOWN ON HOME COPIERS

So you thought you had all the equipment you could possibly need at home: a computer, a laser printer, a fax machine. But if you run a business out of your house or have a bad habit of leaving your resumé on the office copying machine, you may want to consider adding a personal copier to your arsenal.

Home photocopiers, which range from around $400 to $2,000, are comparable in size to a large microwave oven. A basic machine has a top that moves during the copying process and makes only standard 8½-by-11-in. copies, one page at a time. The more expensive units will reduce and enlarge, handle legal-size paper, and even print in different colors.

Canon, Sharp, and Xerox are the leaders in this market. Canon's most basic unit, the PC-1, requires you to put the original on the glass top and feed each blank sheet of copy paper into the machine manually. Copy speed is 19 seconds a page, so bring a book. The Sharp Z-57 is about twice as fast and can handle letter- and legal-size pages. The feeding mechanism is similar to an office copier, using paper trays for the blank pages instead of a manual feed. The Xerox 5260 will reduce to 64% and 75% or enlarge to 124%. Even though it's an upper-end product, the 5260 is fairly compact, measuring 18 in. wide, 17 in. long, and 10 in. deep.

CARTRIDGE COSTS. These machines use changeable ink cartridges that can produce about 3,000 copies and cost about $100 to replace. That's fine if you don't do a lot of copying. Say you spend $1,000 for a machine estimated t last four years, depreciatin $20 a month. You're payin about 25¢ a copy if you mak 100 copies per month—20¢ i depreciation plus a nickel fc paper and ink.

But if you make hundred or even thousands of copie a month, those $100 ca tridges can add up. I stead, you might consi er buying a low-en business copier fro such makers as T shiba, Konica, or Mit Your initial investmer will be greater—thes machines start at abou $1,300—but they rely o a toner system that r duces your cost pe copy by about 2.5 cent A toner cartridge for a T shiba BD-3810, a basic smal business copier, sells fo about $40 and can yield up t 5,000 copies.

Most dealers say both pe sonal and small-business m chines are fairly reliable. you're worried about breal downs, buy a service contrac Canon and Sharp dealers o fer three years of servic for $100. Xerox throws it i for free. *Stuart Wei*

A COMPARISON OF HOME COPIERS

MODEL/PRICE*	FEATURES
CANON PC1 $795	Letter-size copies in 19 seconds
SHARP Z-57 $1,095	Letter, legal in 11 seconds
XEROX 5260 $1,695	Letter, legal in 11 seconds; reduces, enlarges
TOSHIBA BD-3910 $1,800	Letter, legal in 9 seconds; reduces, enlarges

*SUGGESTED RETAIL PRICE; MOST MODELS AVAILABLE AT BIG DISCOUNTS DATA: BW

Smart Money

STOCKS THAT COULD LEAD THE PACK IN AN UPTURN

What do you do when growth stocks stop growing? If you're Michael Landry, who heads Mackenzie Investment Management, you shift into cyclicals. And you'll find other investment pros headed the same way in the wake of the Nov. 15 market slide that sent cyclical prices down about 5.6%, vs. the 4.3% dip in the S&P 500.

Cyclicals are companies in such industries as airlines, automobiles, mining, and steel, where earnings depend heavily upon the booms and busts of the business cycle. The idea is to move in when a business has been soft and profits are down. And you need the discipline to sell when the company is showing strong earnings. One tipoff to sell a cyclical: a low price-earnings ratio. It shows that investors believe the company has peaked.

"We're not saying there aren't opportunities out there in growth stocks," says Landry, whose Mackenzie American Fund is now 89% in cyclicals. "But we're banking on a modest recovery starting late in the first quarter that will be led by investment spending, rather than consumer spending."

PRESSED METALS. Consequently, he sees earnings moving up briskly at such companies as Amax and Phelps Dodge. Squeezed by the recession, the metals companies have worked hard to lower costs. So they stand ready to reap extra benefits from an upturn. Landry is also impressed by cost-cutting at the auto makers—especially at Ford. "Auto stocks have been beaten down so badly, they represent a good value," he says.

Kemper Securities' Rao Chalasani is betting that fiscal stimulus early in the election year will spur economic growth of 2% to 2.5% enough to propel earnings of some cyclicals. So he's bullish on the outlook for some technology companies whose products are almost as basic to industry as copper or other commodities. He includes chipmakers such as Motorola and communications equipment manufacturers California Microwave and Octel.

Even Rich Freeman, asset manager for Shearson's Aggressive Growth Fund, is giving increased weighting to cyclicals. He's watching disk-drive maker Quantum and Network Systems.

Most of these analysts are betting on cyclicals because they believe President Bush will do something to get the economy moving in 1992. But if the recession drags on, all bets are off. *D. D*

CYCLICAL CHOICES

	Price Nov. 14	Price Nov. 22	P-E ratio
AMAX	20	19⅛	16.5
CALIFORNIA MICROWAVE	18¾	19¼	19.1
NETWORK SYSTEMS	16⅜	14⅛	24.7
OCTEL COMM.	18½	17½	16.7
PHELPS DODGE	76¼	68⅝	7.8

DATA: BRIDGE INFORMATION SYSTEMS INC.

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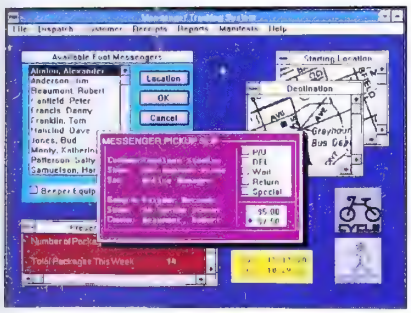

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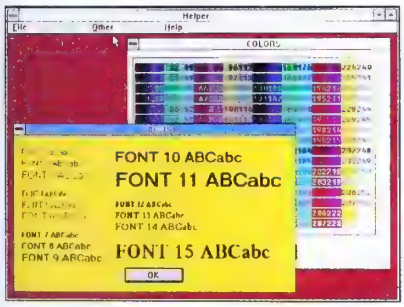

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THE ACURA VIGOR GS HAS HONDA'S FAMOUS COMFORT AND QUALITY

THE MAZDA 929'S STYLING IS REMINISCENT OF A CLASSIC JAG

Autos

JAPANESE LUXURY, WITHOUT THE STICKER SHOCK

It wasn't long ago that Japanese cars projected an image of reliable, economical transportation. But Lexus and Infiniti changed that as they charged into the U.S. luxury market two years ago with highly styled cars aimed at breaking the German hammerlock on the high end.

Now, the Japanese are redefining the class between the two, a near-luxury segment of $20,000 to $30,000 family sedans. It's a bridge for baby boomers who've outgrown the Toyota Camry but can't stomach the payments on a $42,000 Lexus LS 400. These image-conscious folks may overlook their father's Oldsmobile or Mercury, cars that traditionally monopolized the class.

Perhaps the best—and most expensive—of the handsome new Japanese entries is the Mazda 929. It starts at $27,800, but that gets you features not available on most cars. The passenger airbag, for example, is standard.

SOLAR COOLING. What really sets the 929 apart is precocious styling. The dashboard curves around the driver with forms that go beyond the so-called organic shapes of today's most advanced cars. Especially note the trapezoidal air-conditioning control panel, with its analog clock, that fits to the contours of the dashboard. Exterior styling is a bit reminiscent of a classic Jag.

Then there are the options. Compact-disk players and heated leather seats are commonplace on all these cars. But for just over $30,000, Mazda throws in a solar ventilation system. In hot weather, solar cells built into the sunroof power tiny exhaust fans that remove hot interior air from a parked car, cutting the time it takes to cool it down by 30%. On cooler days, the cells give the battery a boost.

MITSUBISHI'S DIAMANTE COMES CRAMMED WITH GADGETS

As opposed to the finesse of the Mazda 929, the Mitsubishi Diamante puts its technology in your face. It starts at $20,000, but the LS version, with a 202 horsepower engine and $25,135 base price, is the true flagship. The impress-your-neighbor gadgets, many of them unnecessary, can boost that to over $30,000.

The Euro-handling package, for example, incorporates a traction-control system, a practical enhancement that keeps the rear wheels from spinning on slippery surfaces. But it also includes "trace" control, which annoyingly cuts back the power during hard cornering. Another button switches the suspension to "sport," changing the Diamante's velvety ride to one that's uncomfortably harsh.

The new aspirants from established luxury brands Acura and Lexus take a more conservative tack. Both adap styling cues from their u scale brethren.

The Lexus ES 300 is a cop in miniature of the LS 40 The $25,000 sedan mimics th LS 400's electroluminescen display with a less expensiv version and uses the sam type of key, with its tiny re mote-control button that u locks all the doors before yo reach your car. Performanc and handling are similar, as the interior silence. Miniatu ization shows, however, in th lack of front-seat headroo and the cramped rear seat.

NO TILT. Against these car the new $23,265 Acura Vigo GS—a notch below the pi neering Legend, which las year moved up closer t Lexus-land in size and price— is downright Spartan. It ha the famous fit and finish yo expect of Honda product and its zebrawood interio trim outshines the Legend simulated walnut. But it ha the Legend's undesirable fe tures: a lurching automat transmission and a windy su roof that lacks a tilt setting

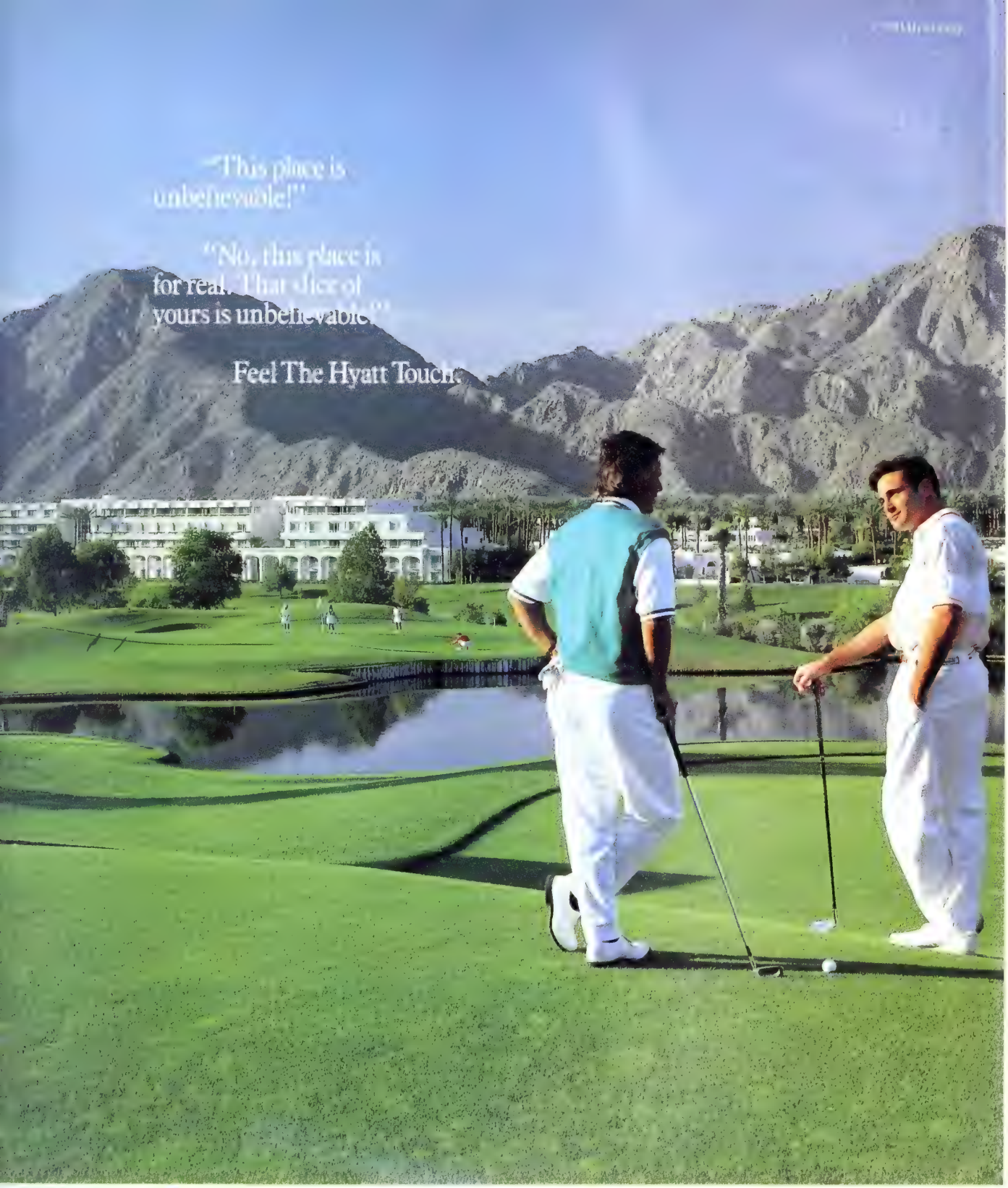
Japanese forays into th near-luxury class are havin an effect. BMW has responde with an overhauled 325i, th first European attempt to r claim the segment. An American carmakers a fighting back with improve Pontiac Bonnevilles and Buic Park Avenues. Either wa customers are coming o ahead. *Larry Armstro*

Worth Noting

■ **TAX RUSH.** On your 1991 return, you can deduct only margin-account interest offset by net investment income. But also the interest amount must be paid by Dec. 31—by the broker debiting your account or by your writing a check.

■ **TEE TIPS.** Business golf outings for the infrequent duffer can be awkward: What are "winter rules?" How much does the caddy get? *From the Course to the Clubhouse* ($4, Tee Box Publications, 908 277-2913) has tips in plain English.

■ **COCOON COMFORT.** Travelers can shake off jet lag in new cubicles at Paris' D Gaulle Airport. Each has bed, shower, phone, and T Call 011-331-4862-0616 to boo a single ($45) or double ($5 for any 16-hour period.



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112A-CA

Are PC Users Working

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1 Based on research by World Health Org., US Dept. of Health and Human Services, Logitech, and others; included in backgrounder referenced above.

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minimize user effort.(1)

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112D-CA

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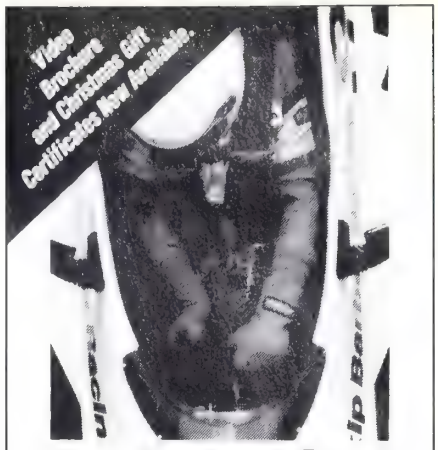

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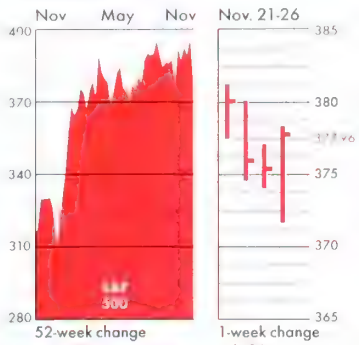
nvestment Figures of the Week

IMENTARY

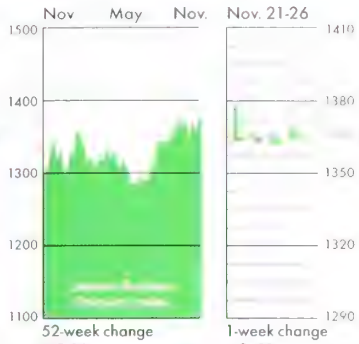
ther discouraging week in the ncial markets, with buyers re- ing wary of stocks. The worst ine was on Nov. 22, when the Jones industrial average 30 points. A rebound of sorts rred on Nov. 26, when the ket reversed early losses to a 14-point gain, spurred by acks at IBM. Small stocks, ever, did not advance. Among bright spots: gold and mutual s. Funds outpaced the market the long and short term, and was one of the few asset es to show gains recently.

STOCKS



52-week change +18.9%
1-week change −0.2%

BONDS



52-week change +5.1%
1-week change −0.4%

THE DOLLAR

52-week change +2.1%
1-week change −0.7%

ARKET ANALYSIS

. STOCKS	Latest	% change Week	% change 52-week
' JONES INDUSTRIALS	2916.1	−0.5	15.0
COMPANIES (Russell 1000)	199.5	−0.2	21.2
LL COMPANIES (Russell 2000)	175.6	−1.4	39.4
COMPANIES (Russell 3000)	212.2	−0.3	22.1

EIGN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
DON (FINANCIAL TIMES 100)	2471.5	0.0	15.3
YO (NIKKEI INDEX)	23,112.1	−0.4	0.3
ONTO (TSE COMPOSITE)	3448.3	−1.5	9.7

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.51%	4.61%	7.3%
30-YEAR TREASURY BOND YIELD	7.95%	7.90%	8.4%
S&P 500 DIVIDEND YIELD	3.27%	3.24%	3.7%
S&P 500 PRICE/EARNINGS RATIO	21.0	21.0	14.6

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.9	384.9	Negative
Stocks above 26-week moving average	42.2%	45.0%	Neutral
Speculative sentiment: Put/call ratio	0.49	52.3	Positive
Insider sentiment: Vickers sell/buy ratio	2.09	1.92	Neutral

IDUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

R-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
PECIALTY APPAREL RETAILERS	11.6	117.9	GAP	14.2	245.7	50 1/8
HOES	7.0	95.5	NIKE	12.4	74.1	58 3/4
OFT DRINKS	6.7	35.0	COCA-COLA	8.1	49.7	68 1/2
OMMUNICATIONS EQUIPMENT	5.9	67.0	ANDREW	9.0	59.2	30 1/4
EALTH CARE SERVICES	5.7	50.1	MANOR CARE	10.8	34.4	20 1/2
R-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
ACHINE TOOLS	−17.1	−6.8	CINCINNATI MILACRON	−21.6	−19.4	7 1/4
OSPITAL MANAGEMENT	−16.0	−26.9	NATIONAL MEDICAL ENTERPRISES	−24.1	−30.1	12 1/8
ERSONAL LOANS	−14.3	58.2	HOUSEHOLD INTERNATIONAL	−20.1	78.6	43 3/4
NGINEERING AND CONSTRUCTION	−13.1	1.1	FLUOR	−17.8	−2.1	35 3/4
OMESTIC OIL	−12.3	−16.9	ORYX ENERGY	−21.5	−39.9	25 3/8

UTUAL FUNDS

MORNINGSTAR INC

DERS

-week total return	%
AKMARK	8.2
TRATEGIC INVESTMENTS	7.0
LLIANCE TECHNOLOGY	5.9

eek total return	%
PPENHEIMER GLOBAL BIO-TECH	115.6
BERWEIS EMERGING GROWTH	92.7
MERICAN HERITAGE	91.3

LAGGARDS

Four-week total return	%
G. T. JAPAN GROWTH	−10.1
SHEARSON MULTIPLE OPPORTUNITIES	−9.0
STEADMAN AMERICAN INDUSTRY	−7.2

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−15.4
USF&G EUROPEAN EMERGING COMPANIES	−12.5
STRATEGIC GOLD/MINERALS	−11.8

ELATIVE PORTFOLIOS

DATA RESOURCES INC

lar amounts
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ue of $10,000
ested one year ago
ach portfolio

centages indicate
-day total returns

U. S. stocks	Foreign stocks	Treasury bonds	Money market fund	Gold
$12,257	$11,703	$11,397	$10,539	$9,708
−2.57%	−0.54%	−1.51%	+0.09%	+2.25%

ata on this page are as of market close Tuesday, Nov. 26, 1991, unless otherwise indicated. Industry ps include S&P 500 companies only; performance and share prices are as of market close Nov. 25.

Mutual fund returns are as of Nov. 22. Relative portfolios are valued as of Nov. 25. A more detailed explanation of this page is available on request

BUSH NEEDS TO WORK ON A NEW DOMESTIC ORDER

Wanted: the kind of strong Oval Office leadership on domestic affairs that galvanized the international coalition against Saddam Hussein and executed Operation Desert Storm. All of U. S. legislative history shows that unless the President sets an agenda, there can be no effective domestic policy. That's why there are questions about the leadership of George Bush.

The President is correct to resist the rising congressional pressure for a quick-fix tax cut to jump-start the economy, but he has not made his case so the country can understand it. The result is that his position is seen as head-in-the-sand obstructionism instead of leadership, and that undermines confidence in his economic program. A domestic equivalent of Bush's New World Order is needed.

Leadership is required even if Bush chooses to stand pat on a broad macroeconomic stimulus. Other domestic policies are in a shambles. When Desert Storm ended in triumph, Bush told a joint session of Congress that he wanted it to send him transportation and anticrime bills within 100 days. He got neither one, nor did he get the capital-gains cut or the bank reform bill that he wanted. Yes, the Democratic Congress bears much of the blame. And yes, domestic policy is more contentious than foreign policy, but it's hard to escape the conclusion that his aides can't deliver the goods.

Many GOP members of the House acknowledged the need for additional domestic policy clout in the White House when 81 of them signed a petition on Nov. 22 endorsing Housing & Urban Development Secretary Jack Kemp as a domestic policy czar. Kemp is probably unacceptable to the White House, but those who are proposing a vigorous domestic adviser are on the right track. In foreign policy, Bush has Jim Baker to rely on; in the Gulf War, he could lean on the strong shoulders of Dick Cheney, Colin Powell, and Stormin' Norman Schwarzkopf. Domestically, his top advisers are Chief of Staff John Sununu, Budget Director Dick Darman, and Treasury Secretary Nick Brady. The record speaks for itself. The foreign policy team delivers the goods; the domestic one doesn't. President Bush should act like a Chief Executive and shake up his domestic team.

WHY BANK REFORM CAN'T WAIT

The health of the banking system affects us all. It's estimated it could cost more than $200 billion to repair the shattered system even if the economy improves (page 30). Much of that money is going to have to come from the taxpayer. Need more proof? The bank "credit crunch" is dampening economic growth largely by starving small business of credit. And smaller businesses are a critical source of economic innovation in the U. S. Indeed, small business creates one of every two new jobs.

That's why Washington's failure to pass a comprehe sive bank-reform bill tops the list in legislative ineffectiv ness in a year with lots of competition. Sure, we hear all th excuses by the Bush Administration and Congress. Th lamest is that the insurance companies, Wall Street firm big banks, small banks, and just about anyone with a mo ey stake and a political action committee bribed and cajole to save their bacon. So what? Government is about resistin these pressures and making hard decisions in the nation interest.

Bank reform is not a parochial issue, and a bill ought n to be shaped by special-interest pleading. Decisions made t day will affect the future flow of investment capital, th strength of small business, the nation's future competitiv ness, and the odds of future taxpayer bailouts. A bill limi ed almost exclusively to funding deposit insurance is a co out that will cost taxpayers billions more than true ban reform. We are about to enter an election year, and eac Presidential candidate should spell out in detail his plans f overhauling the banking system. And then we need a pledg from each that a bank-reform bill will be a top priority in h first 100 days of office.

FREE EUROPEAN CARRIERS FROM U.S. BARRIERS

If the post-Communist world needs more proof that stat controlled businesses don't work, Europe's airlines offe plenty of it. Passengers pay stratospheric fares—doub or triple those for similar distances in the U. S. Then at ta time, they often pay again to prop up pampered stat owned airlines made inefficient by limited competition.

Now, despite resistance by French-led protectionists, th European Community aims to gradually open its skies (pag 50). The goal by the mid-1990s is to let EC airlines set far freely and compete on any route in the 12-nation E Although a painful shakeout awaits the industry, consume will benefit. And so may U. S. airlines that have survive deregulation's mill. A free-market Europe, soon to be th world's biggest economy, is crucial to their new global an bitions.

For that reason, Washington should take the last step American deregulation: dropping barriers to foreign carrier As it stands, U. S. airlines can fly many routes with Europe, a legacy of post-World War II treaties. But th Europeans have no such rights inside the U. S. With the lower costs, U. S. airlines know they have little to fe from European competition at home and lots to gain fro even greater freedom in Europe. Washington should op up, provided Europe does more of the same.

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ness Week
December 16

ECESSION WILL IT GO GLOBAL? CREDIT CARDS THE COMING SHAKEOUT RETAILING RISING STARS

399 7

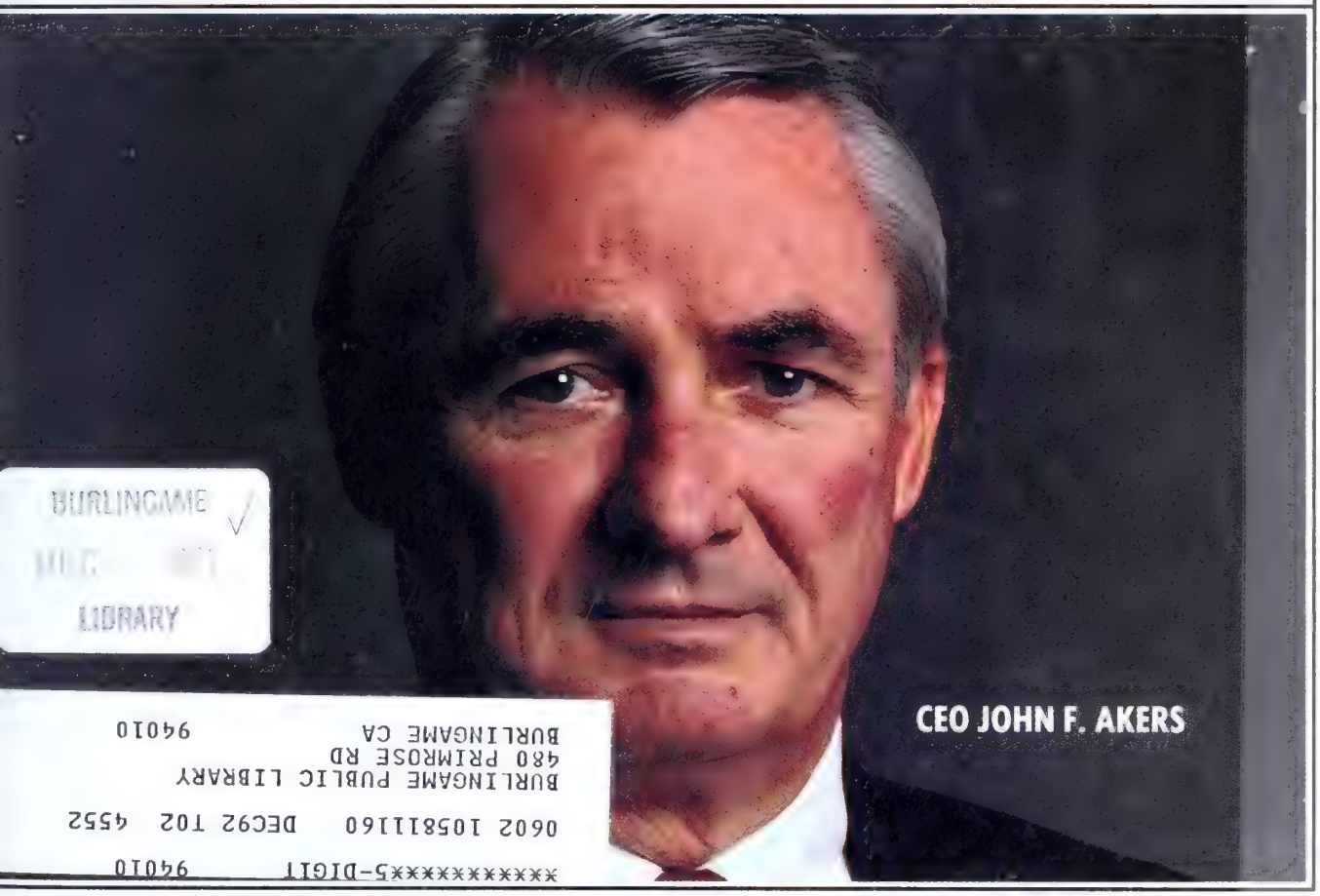
BusinessWeek

EMBER 16, 1991 A McGRAW-HILL PUBLICATION $2.50

THE NEW IBM

Is It New Enough?

PAGE 112



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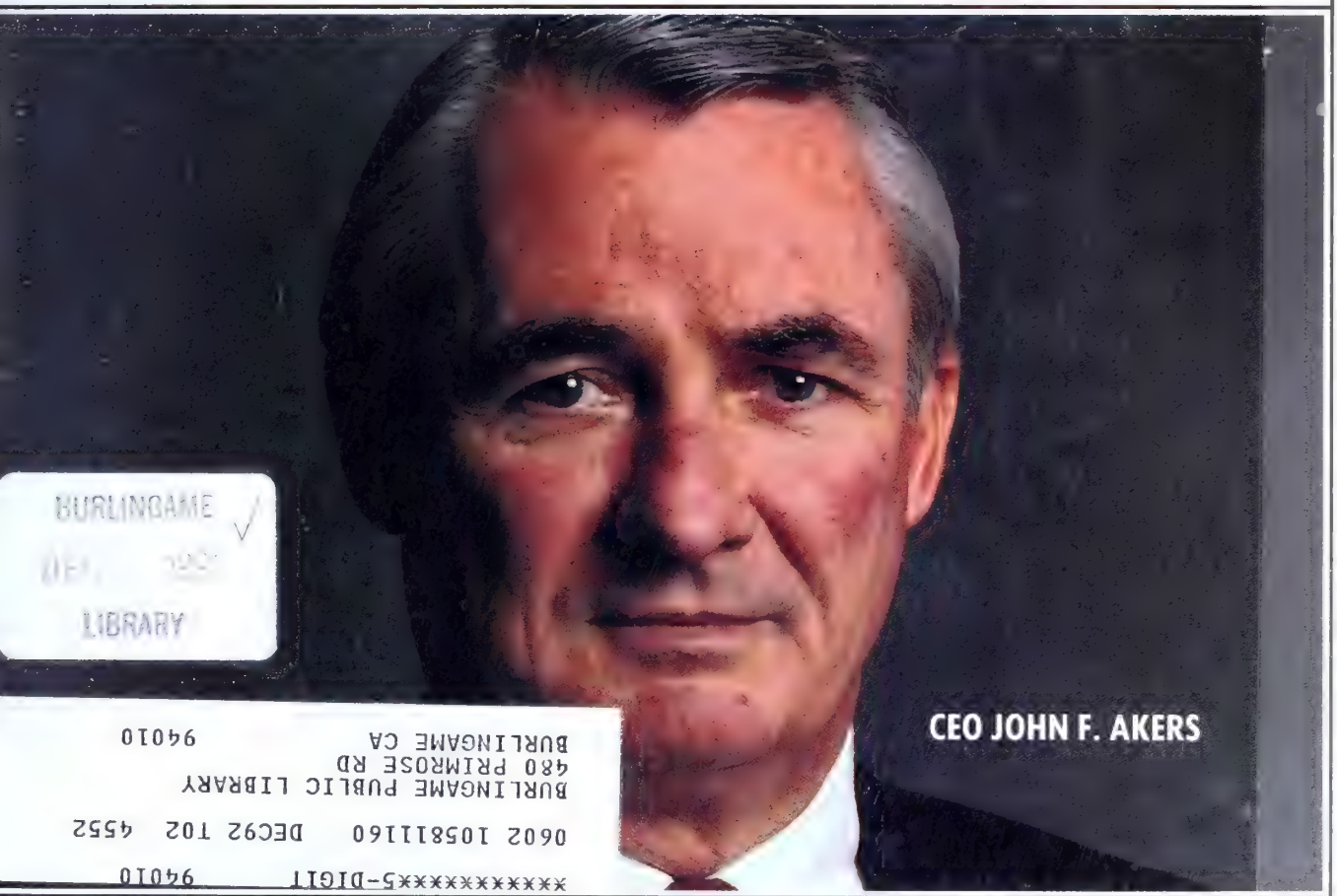

CEO JOHN F. AKERS

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HAVE YOU DRIVEN A FORD LATELY?

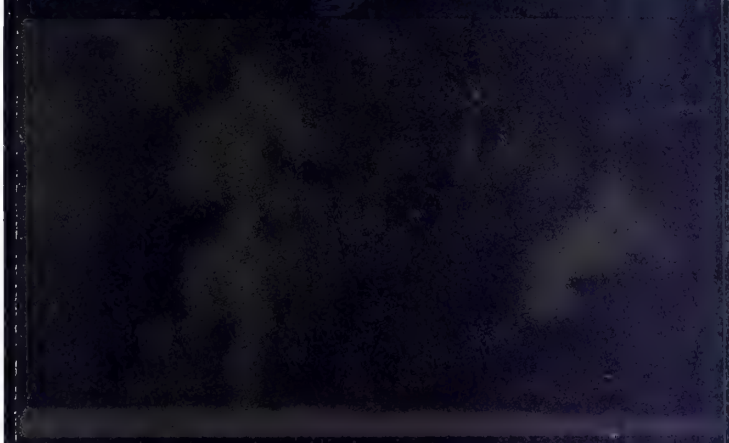
THE FORD PERFORMANCE LINE.
True performance lies outside the sterile confines of 0-60 statistics and slalom cones. It's the shot of adrenaline that comes when you feel an engine respond on command. The knowing smile when you see the sign that reads: "Curves Ahead." It's as much exhilaration as acceleration, and at Ford, it's what our performance cars are fueled by.

THE HARDWARE.
With engine technology racing as fast forward as the engines themselves, the possibilities are virtually endless. Consider the possibilities of a power-flexing Supercharger in Thunderbird SC. The turbocharged Probe GT. The 24-valve masterpiece waiting in the new Taurus SHO. Or the 225-horse kick of the Mustang GT.

THE DRIVE.
Straight-line performance stops at the first curve. And that's where the rest of Ford's performance technology kicks in. The innovative driver adjustable suspension of Thunderbird SC. Speed sensitive steering on Probe GT. And a sport suspension specially designed for quick handling on Escort GT.

The 1992 Ford Performance Line. Isn't it time you had a sports car that could rev up more than just its engine?

FORD. THE BEST-BUILT AMERICAN CARS ...ELEVEN YEARS RUNNING.
Based on an average of consumer-reported problems in a series of surveys of all Ford and competitive '81-'91 models designed and built in North America.



PROBE GT

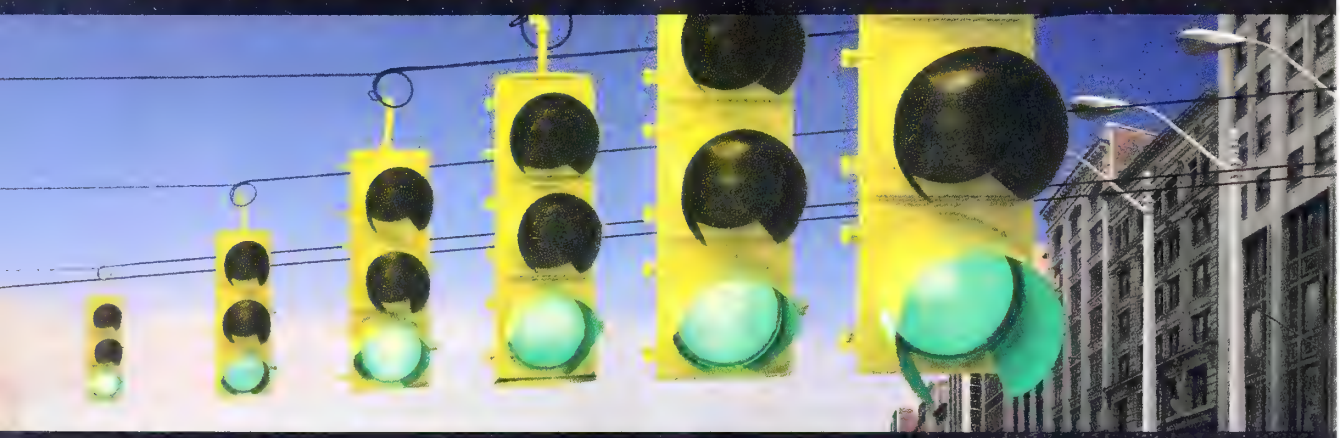
T

Buckle up—together we can

VE YOU BET THE MOON YOU COULD BEAT IT TO THE CORNER?

VE YOU MADE A CITY DISAPPEAR?

VE YOU ALWAYS HATED LONG GOODBYES? MUSTANG GT CONVERTIBLE

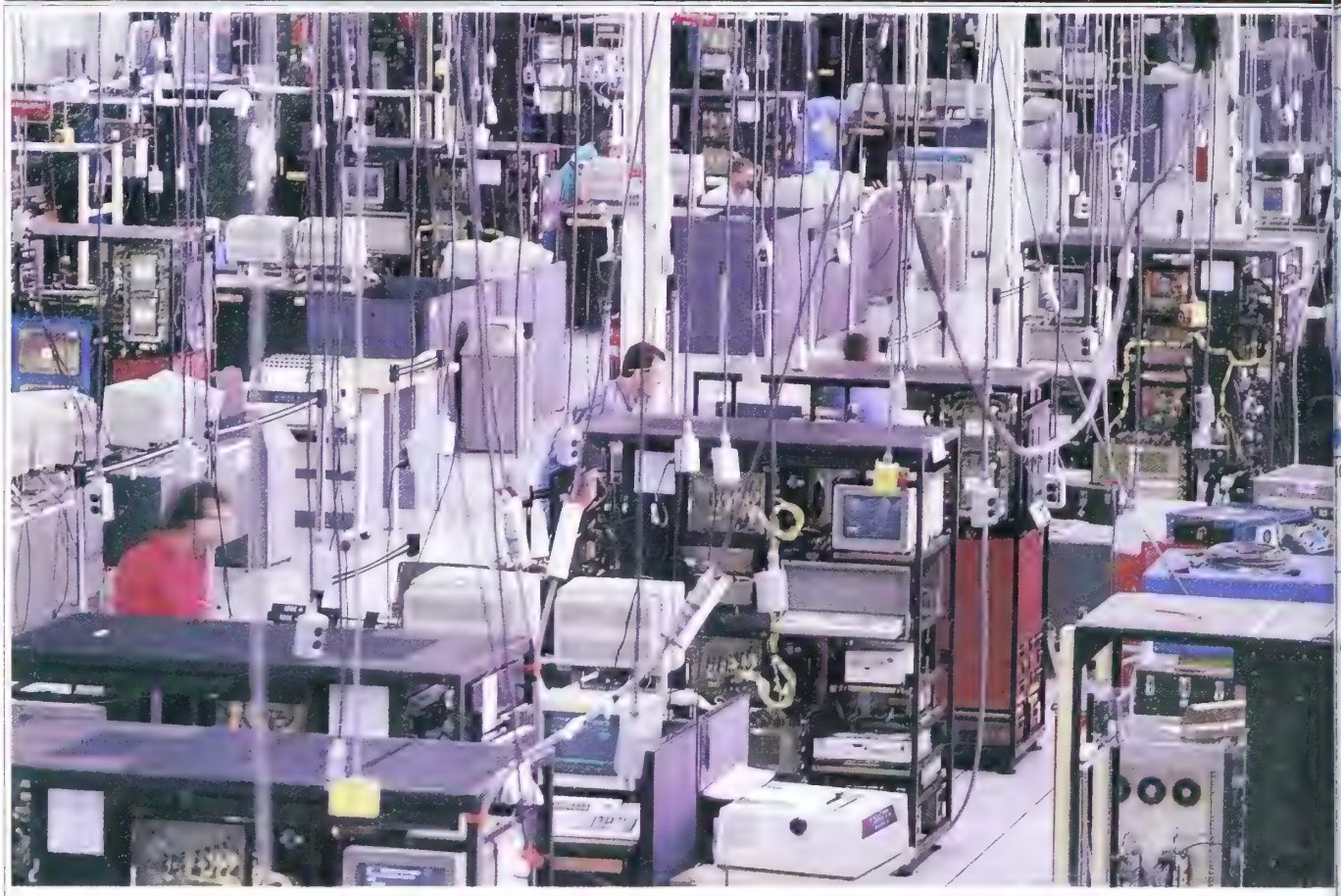


VE YOU WISHED ALL THE LIGHTS IN THE WORLD WERE GREEN?

NUMBER 3244

BusinessWeek

DECEMBER 16,19



THE OLD IBM: THE MAINFRAME UNIT DOMINATES HEADQUARTERS POLICY, EX-IBMers SAY, AND IMPEDES THE DEVELOPMENT OF NEW BUSINESSES

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They know computers, and they know the floor. But most of all, they know that the old ways simply no longer work

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The right fuel to restart recovery

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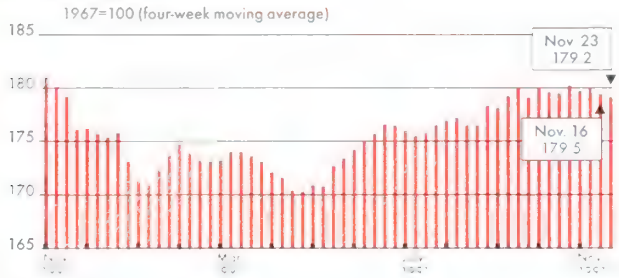
BusinessWeek Index

PRODUCTION

Change from last week: −0.2%
Change from last year: 1.7

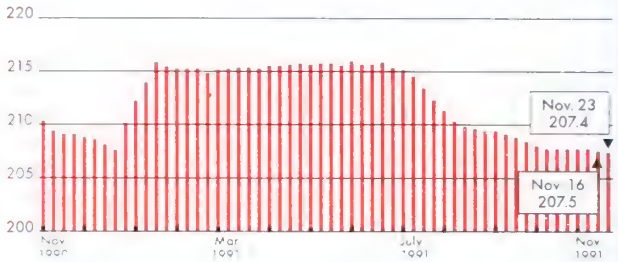


The production index decreased slightly during the week ended Nov. 23. The index' stagnation since mid-September is a further sign of the weakness in the industrial sector. On a seasonally adjusted basis, output of autos, steel, electric power, paper, and lumber declined. Rail-freight traffic, truck, crude-oil refining, coal, and paperboard production all increased. Before calculation of the four-week moving average, the index increased to 179.7, from 178.4 in the week before.

B/W production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: −0.1%
Change from last year: −0.8%



The leading index was virtually unchanged during the week ended Nov. 23. Stock prices dropped sharply lower, and the number of business failures jumped back after posting a big decline in the previous week. The growth in real estate loans deteriorated, and bond yields were higher. The growth rates for materials prices and M2 improved. Before calculation of the four-week moving average, the index dropped to 207.2, from 208.7.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (11/30) thous. of net tons	1,603	1,760=	−13.0
AUTOS (11/30) units	70,127	112,002r=	−35.8
TRUCKS (11/30) units	49,127	77,191r=	−24.6
ELECTRIC POWER (11/30) millions of kilowatt-hours	53,595	52,991=	2.5
CRUDE-OIL REFINING (11/30) thous. of bbl./day	12,951	13,239=	−4.0
COAL (11/23) thous. of net tons	21,352=	19,949	23.8
PAPERBOARD (11/23) thous. of tons	799.2=	762.9r	3.4
PAPER (11/23) thous. of tons	771.0=	777.0r	−1.4
LUMBER (11/23) millions of ft.	518.3=	519.3	99.0
RAIL FREIGHT (11/23) billions of ton-miles	21.6=	21.0	28.6

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA, SFPA, Association of American Railroads

LEADING INDICATORS

	Latest week	Week ago	% Change year ago
STOCK PRICES (11/29) S&P 500	376.27	379.92	18.1
CORPORATE BOND YIELD, Aaa (11/29)	8.46%	8.46%	−8.0
INDUSTRIAL MATERIALS PRICES (11/29)	95.6	95.7	−6.1
BUSINESS FAILURES (11/22)	456	341	67.0
REAL ESTATE LOANS (11/20) billions	$396.0	$396.7r	2.0
MONEY SUPPLY, M2 (11/18) billions	$3,405.2	$3,399.4r	2.5
INITIAL CLAIMS, UNEMPLOYMENT (11/16) thous	413	493	−8.6

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun & Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally adjusts data on business failures and real estate loans

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (12/4)	129	128	132
GERMAN MARK (12/4)	1.61	1.58	1.48
BRITISH POUND (12/4)	1.77	1.80	1.95
FRENCH FRANC (12/4)	5.52	5.40	5.03
CANADIAN DOLLAR (12/4)	1.14	1.13	1.16
SWISS FRANC (12/4)	1.43	1.40	1.27
MEXICAN PESO (12/4)	3,051	3,050	2,936

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars.

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Change year ago
CONSTR. SPENDING (Oct.) annual rate, billions	$411.5	$407.5r	−5.3
NEW HOME SALES (Oct.) annual rate, thous.	513	502r	10.3
12 LEADING INDICATORS COMPOSITE (Oct.) index	145.5	145.3r	2.8
PERSONAL INCOME (Oct.) annual rate, billions	$4,857.2	$4,846.8r	3.4

Sources: Census Bureau, Commerce Dept

PRICES

	Latest week	Week ago	Change year ago
GOLD (12/4) $/troy oz	365.250	366.250	−2.9
STEEL SCRAP (12/3) #1 heavy, $/ton	94.00	94.00	−11.3
FOODSTUFFS (12/2) index, 1967=100	203.8	203.6	−4.0
COPPER (11/30) ¢/lb	108.9	109.0	−9.1
ALUMINUM (11/30) ¢/lb	51.5	52.6	−27.5
WHEAT (11/30) #2 hard, $/bu.	3.84	3.77	41.2
COTTON (11/30) strict low middling 1-1/16 in., ¢/lb.	53.74	53.75	−20.2

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market

MONETARY INDICATORS

	Latest week	Week ago	% Change year ago
MONEY SUPPLY, M1 (11/18)	$888.8	$885.3r	7.9
BANKS' BUSINESS LOANS (11/20)	295.3	295.5r	−9.3
FREE RESERVES (11/27)	938	802	17.5
NONFINANCIAL COMMERCIAL PAPER (11/20)	134.6	135.1	−11.2

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed for a two-week period in millions)

MONEY MARKET RATES

	Latest week	Week ago	Year ago
FEDERAL FUNDS (12/3)	4.86%	4.89%	7.60%
PRIME (12/4)	7.50	7.50	10.00
COMMERCIAL PAPER 3-MONTH (12/3)	4.91	4.94	7.94
CERTIFICATES OF DEPOSIT 3-MONTH (12/4)	4.82	4.87	8.23
EURODOLLAR 3-MONTH (11/30)	4.90	4.90	8.25

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipment. 1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

THE ART OF CHRISTMAS, 1715.

COGNAC. L'ART DE MARTELL.

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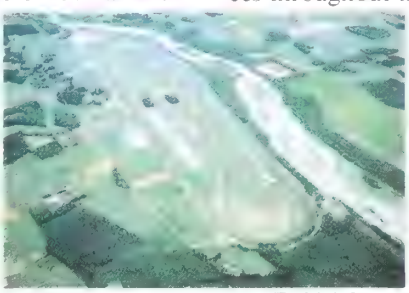

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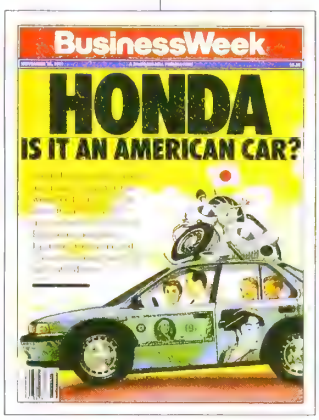
Readers Report

OF HONDA AND THE JAPANESE PRESENCE IN AMERICA

Your story "Honda: Is it an American car?" (Cover Story, Nov. 18) attempts to raise an important question: Is Japanese investment good for the U.S.? Our answer is simple: Honda's investment is good for America.

At our four plants in Ohio, Honda is building cars, engines, and motorcycles with the help of a substantial number of American supplier companies. This has not only resulted in thousands of jobs for Americans like myself but has improved the technological capability of many American companies and the technological knowhow of Americans. BUSINESS WEEK could have learned this from speaking with representatives of our supplier companies.



Unfortunately, because of several distorted and inaccurate statements, BUSINESS WEEK led its readers to believe that Honda's $2.2 billion investment in the U.S. is not what it appears. Worst of all was the assertion that the U.S.-Canadian Free Trade Agreement (FTA) rules as a means to increase the local content of Honda cars. This is impossible because, as the U.S. Customs Service admits, Customs has not yet adopted rules for calculating origin, and the audit—which is routine under the FTA—has yet to be completed. We believe that the cars Honda produces in North America are substantially North American.

It is ironic that the story and the Customs audit focus on an engine produced by Honda in Ohio. At a time when General Motors, Ford, and Chrysler import small engines for their cars, Honda is the only auto maker that manufactures a small, fuel-efficient engine in the U.S. In fact, we produce more than 500,000 engines a year in the U.S.

Honda is working with many of the same parts suppliers as GM, Ford, and Chrysler. Importantly, the local content of Honda products in the U.S. has increased every year since 1982, when we became the first Japanese auto maker to build cars in America. Today, 65% of Honda Div. cars sold in the U.S. are manufactured in North America. Our bottom line is to produce the best product for our customers. And to do it in a way that also benefits America.

Scott N. Whitlock
Executive Vice-President
Honda of America Manufacturing Inc.
Marysville, Ohio

You mentioned my company, Copperweld Steel, as being 63.6% Japanese-owned. This is true. Until 1987, we were 66% French-owned and 33% public. Today, we are 63.4%-owned by four Japanese companies, 28%-still-owned by a French company, with the balance publicly held. Without the capital supplied to our company by our Japanese owners, we would no longer exist.

Our negotiations with Honda on serving them by providing the crankshaft and other high-quality alloy steel bars to their manufacturing process has been very competitive, and we are but one of three high-quality alloy bar suppliers at the Honda facility. I assure you that the steel for the Honda Accord's crankshaft, as well as other products that we supply, is 100% American.

W. Lawrence Weeks
President & CEO
Copperweld Steel Co.
Warren, Ohio

Are we so naive to think Japan Inc. has any intention to show or teach us about their latest technological achievements in such areas as research and development or manufacturing? Hell, no—they are our competitors, out to beat the pants off us!

Your article shows clearly that they are willing to go to any lengths to manipulate the books to look like they want to play fairly when in fact they are going to keep the most sensitive technol-

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ogy to themselves and give us the lower-tech jobs of assembly or painting and the like.

Pascal G. Houcke
Richboro, Pa.

How can people like U.S. Customs Service Commissioner Carol Hallett do their jobs as long as Japanese industry is permitted to lobby the same people we elect to represent us?

William H. Kury
Charlevoix, Mich.

I believe that we have sustained another Pearl Harbor, but this time it was economic, not military. And this time, it was so insidious and veiled that many of us don't know it has happened. (What's more American than a Honda or a Sony or a Panasonic?) Sadly, many of us don't care. We don't want to be distracted from the pleasure of being plugged into a Walkman or a Nintendo.

Erwin P. Molnar
Bellevue, Wash.

If most Americans really cared about the nationality of the parts in their new cars or the nationality of their cars, Honda's Accord would not be the leading car sold in the U.S. If most Americans wanted to sacrifice a quality car for nationalism, they'd agree with Lee Iacocca's cry for trade quotas on Japanese autos and would buy Mr. Iacocca's products. Smartly, American consumers know what capitalism is about: Superior products deserve their place in the market, regardless of national origin. And as Robert Reich has argued for years, the American worker truly benefits by the training that successful manufacturers provide.

Anthony F. Calianese
Oradell, N.J.

In an issue that spent most of its pages talking about corporate downsizing, layoffs, recession, and job losses, it was ironic that the feature article then pointed an editorial finger at the Japanese, not to praise the jobs they have created in America but to stress that their efforts are not good enough.

W. Jeffrey Weise
Holliston, Mass.

You argue that Honda's cars are not as "American" as they claim because they use inputs from companies that, although located here, are Japanese-owned. Why should it matter who owns these input companies? What should be relevant is the level of capital investment they are making domestically. American workers and managers were employed throughout the entire process. The Japanese are pumping money into our economy, and we are complaining.

Brian A. Heller
Brookline, Mass.

The Japanese auto makers and parts suppliers have provided thousands of good jobs for Americans in times when many traditional "American" employers were paring their payrolls. By setting new standards for quality in their fields, these companies have shown that U.S. workers can be as productive as those from any other country.

John H. Hollenback
Woodbury, Conn.

Is this latest criticism mostly "pickle smoke" from the Big Three, when in fact they have eliminated a huge share of the domestic jobs themselves and now want to point fingers at their competitors? I saw what the effect of the protective duty was a few years ago: The Big Three raised their prices also, and everyone grabbed a big bonus at the expense of the American customer. It seems to me that there is a determined effort on the part of Japanese industry to keep jobs for their people, and that ingredient is factored into the whole picture. That seems pretty noble to me.

Lynn Gilbertson
Minneapolis

CORRECTIONS & CLARIFICATIONS

In "Tough times, tough bosses" (Cover Story, Nov. 25), we incorrectly identified Russell Reynolds Associates as the largest executive-recruiting firm. It ranked No. 2 in 1990 billings.

A graphic that identified the sources of parts in a Honda car in the story "Honda: Is it an American car?" (Cover Story, Nov. 18) should have identified the car as an Accord, not a Civic.

In "Japan's bankers are pulling in their necks," (International Business, Dec. 2), we erred in saying that the Long-Term Credit Bank of Japan Ltd. is seizing assets of a client, Japan Leasing Corp., to raise cash. While Japan Leasing is selling assets on its own, LTCB says it continues to "conduct business as usual" with the leasing firm.

WAS WHARTON A VICTIM OF ITS RIGOROUS DICIPLINE?

As members of the 1991 graduating class of Wharton Executive MBA (WEMBA) program, we read with mild interest your article "Back to school" (Special Report, Oct. 28) on executive education. This letter will briefly address two issues of significance:

First, it seems necessary to clarify a misperception about the "scores" under the "schools graded by grads" section of the top-20 summary. Wharton expects much of its students, and its students expect much of the institution. We have been taught to approach quantitative analysis with brutal objectivity, a disdain for "fudge factors," and a genuine respect for discrete numerical values. We employed this method when responding candidly to the BUSINESS WEEK questionnaire asking us, for example, to rate faculty on a scale of 1 to 10 (1 being poor, 10 being excellent). Imagine, then, our surprise in learning that a rating well above the midpoint could result in a score of "D." Based on our comparative ranking, it appears that industries have countless sources of enthusiastic EMBA grads, but those businesses that want straightforward, uninflated critical analysis might well look to Wharton.

Second, the descriptive comments "pricey program" and "biweekly sleepover," although colorful, are more likely to elicit visions of a yuppie scout troop than the carefully orchestrated, intense learning experience that was the WEMBA. Students Amtraked in from New York City's financial district, Washington's political and international center, and the many industrial centers surrounding Philadelphia and up and down the East Coast. While simple geography dictated "sleeping over," the biweekly residential approach fostered the exchange of skills, knowledge, and perspectives that exceeded even the demands of the academically rigorous program (requiring almost 700 contact hours, "just like the 'regular' MBAs").

Wharton's advantaged location and commitment to the weekend structure allows it to employ high academic entry requirements and sensitivity in student selection for "mix," resulting in an incomparable combination of WEMBA students, year after year, who are the Wharton experience. The faculty structures the learning opportunity, and many contributed greatly to a "deeper understanding of complex phenomena."

Bonnie Greenspan
Woodbridge, Va.

Editor's note: According to Ms. Greenspan, about 90 other 1991 WEMBA graduates signed this letter.

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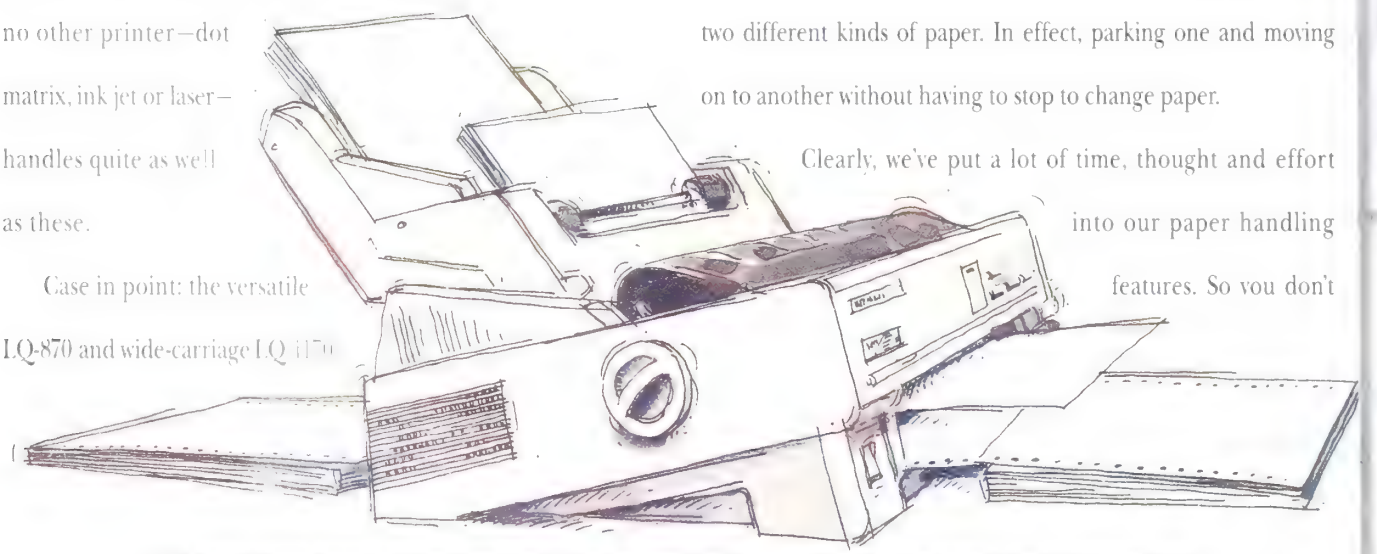

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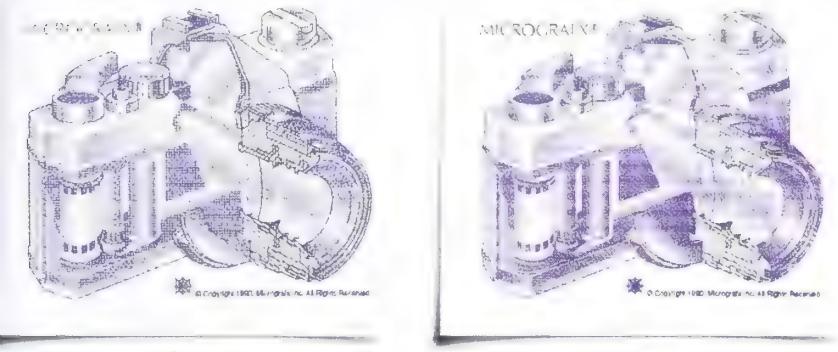

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THE GREAT WHITE LIE:
HOW AMERICA'S HOSPITALS BETRAY OUR TRUST AND ENDANGER OUR LIVES
By Walt Bogdanich
Simon & Schuster • 320pp • $23

THE INTENSIVELY CARELESS AMERICAN HOSPITAL

Walt Bogdanich begins his new book with an extreme and already well-publicized horror story. It is an account of how Dr. Kathryn Hinnant, a pregnant 33-year-old physician, was raped and murdered in 1989 at New York's Bellevue Hospital Center. Her assailant, Steven Smith, was wearing surgical scrubs and a stethoscope. A recently discharged Bellevue psychiatric patient, Smith had spent nearly two weeks living in the hospital and masquerading as a doctor.

By opening this way, Bogdanich invites the suspicion that he's playing to potboiler sensibilities. But wait: *The Great White Lie: How America's Hospitals Betray Our Trust and Endanger Our Lives* turns out to be a detailed and serious look at the nation's troubled medical system. The disturbing lesson: Routine care in many hospitals can be as harrowing as this sensational incident.

Bogdanich, a Pulitzer prize-winning writer for *The Wall Street Journal*, marshalls wide-ranging and often surprising examples of medical malfeasance, from hospitals run by felons to computer programs designed to cheat the federal medicare system. Drawing on more than 15 years of reporting on the industry, he argues that such cases are not "freak accidents or anomalies" but "the direct result of systemic health care problems of enormous proportions."

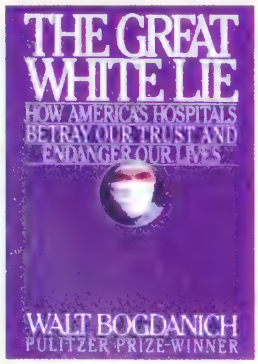
Take the murder at Bellevue. The year before, nearly 1,000 felonies and 2,700 misdemeanors were committed in New York City's hospitals. Still, facing the same sort of financial pressures that had by then pushed one-third of the nation's 6,000 hospitals into the red, Bellevue had reduced its security staff

But the primary villain, in Bogdanich's view, is a makeshift collection of health care policies that gives doctors and hospitals financial incentives to skimp on care. Consider Leelamma Mathew, R. N. We first see her midmorning, passed out drunk on the lawn of Maryland's Leland Memorial Hospital. In time, after multiple doses of the painkiller Demerol disappear during her shift, Mathew is dismissed. But like other temporary nurses with appalling work records, Mathew soon finds a new position because many agencies don't care, and hospitals often don't check. Since the early 1980s, hospitals have been rewarded for keeping treatment costs below government reimbursement rates. One way they've done so is by replacing staff nurses with lower-paid temps. That, says Bogdanich, has given rise to imposters, forgeries, false billings, forced labor, and theft.

Bogdanich details how the use of young, untrained workers to cut labor costs affected the care that Dillon Murphy received during a coronary bypass at North Carolina's Charlotte Memorial Hospital & Medical Center. A transparent plastic bag of what the doctors believed was a cardioplegic solution was

WHO'S BEEN RATED MOST PROFESSIONAL FOUR YEARS IN A ROW?

In many horror stories, Bogdanich sees the profit motive run amok



ısed to stop his heart dur-ng surgery. When the ime came to restart his ıeart, nothing happened. A 19-year-old employee ıad pulled the wrong flu-d from the pharmacy's efrigerator. Murphy's ıeart had been bathed in glucose. The 33-year-old ather of three died.

Underlying many such ales, Bogdanich detects he profit motive run ımok. Charlotte Memori-l, like many other hospi-als, had kept pharmacy taff at a minimum on veekends to save money. At the same time, it had egun an orgy of construction—includ-ng a $40 million office tower, a new arking garage, and a helipad—all to ure doctors and their patient referrals.

Nashville-based Hospital Corporation f America, Bogdanich writes, tried to nfluence physicians to refer patients to ne of its new facilities by paying them s much as $12,500 a month for "medical directorships." Illinois' Leyden Commu-ity Hospital considered a plan to boost urgeries during the slow holiday season y offering physicians who performed 10 major operations within a certain peri-od a fax machine or portable phone. The idea was rejected only after it was made public by the *Chicago Tribune*.

Many of these practices are legal, since regulations forbidding such kick-backs apply only to medicare and medic-aid programs. But Bogdanich also trots out medical felons. Meet Dr. George Gotsis—drug dealer, suspected murder-er, and chief of staff (before it closed) at New London Hospital in Lorain County, Ohio. Meet James C. Giuffre, head of the now-shuttered Giuffre Medical Center in Phila-delphia, known as *matadero*, or slaughterhouse, to Hispanics living near-by. Despite Giuffre's ex-tensive use of underqual-ified or unlicensed per-sonnel and such horri-fying cases as a neglected patient whose mouth be-came infested with mag-gots, the industry's chief regulator, the Joint Com-mission on Accreditation of Healthcare Organiza-tions, allowed the hospital to remain open for years.

Bogdanich says he chose to write about the failures of the health care system rather than its accomplishments because he be-lieves the failures are gravely underesti-mated. The system's "great white lie," he writes, is "a myth holding that all hospitals and doctors are equally good and deserving of our complete and un-questioning trust." Bogdanich's book should help shatter that myth. If noth-ing else, Bogdanich makes a compelling case for tougher outside regulation, let-ting those who pay for health care—primarily government and employers—

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know what they're paying for, and publicly identifying providers that do a bad job. Until that happens, maybe hospitals should have to post this sign above their admitting room doors: Caveat Emptor.

BY JULIA FLYNN SILER

Siler reports on the health care industry from Chicago.

BOOK BRIEFS

WHITEOUT: LOST IN ASPEN
By Ted Conover
Random House • 269pp • $20

RICH, AND LOVING IT

Once, Aspen thumbed its nose at celebrities. Old-timers chuckle over a fellow named Pete, who walked into a local bar where his friend Vodka George was pouring them down with Jill St. John and Jack Nicholson. "Say," Pete asked the bartender, "who are those people with George?"

You don't hear such stories in Aspen anymore. That's where Don married Melanie, after all, and Marla and Ivana had words over The Donald. "I tell you, the rich are coming out of the closet, like gays," says Mary Eshbaugh Hayes, managing editor of *The Aspen Times*.

They're not alone, as Ted Conover reveals in *Whiteout*, a funny, caustic view of life among the town's lotus-eaters. There's the "alive tribe"—whacko New Agers who believe that anyone who gets sick had it coming. Environmentalists who sit at the feet of an aging John Denver. And politicos such as Ted Kennedy, spotted in a bar with a blonde on his knee, and his sister-in-law Ethel, who's not above stiffing a cab driver.

The atmosphere is corrupting, Conover decided in the two years he spent there as a *Times* reporter and Mellow Yellow cab driver. A friend who had saved for 20 years to buy an aspen grove ended up building a $500,000 house on it—for its resale value.

Modern Aspen—a place to stimulate body and mind—was the postwar dream of Container Corp.'s Walter Paepcke. He promoted skiing, founded the Aspen Institute, a cultural think tank, and organized 1949's Goethe Bicentennial Festival, which drew Albert Schweitzer. His widow now likens Aspen to an over-fattened goose, near death from richness.

Resorts have a shelf-life, Conover theorizes, so maybe one day those mansions will be rooming houses. If so, he won't be around to see it. "Aspen had happened to me," he writes: He began lusting for a leather coat and a Jeep Cherokee. When he started thinking of investing in real estate, he skipped town.

BY SANDRA D. ATCHISON

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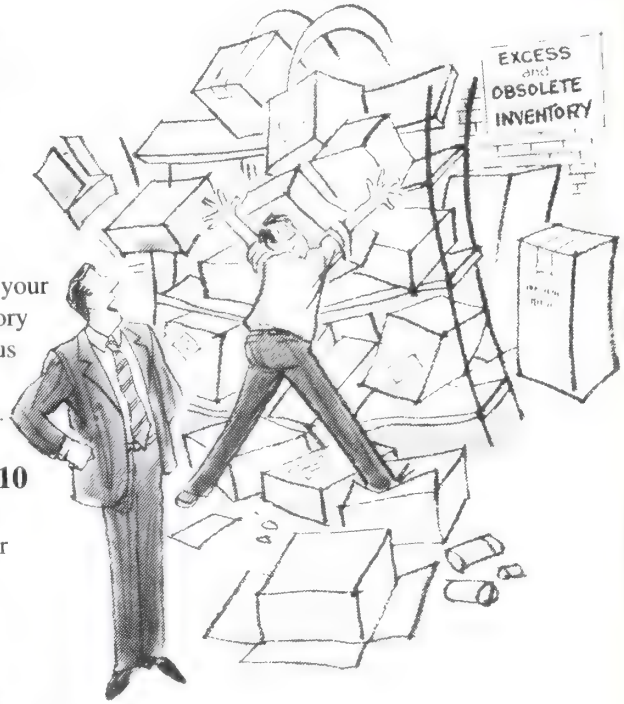

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ALL THROUGH THE HOUSE (AND SENATE), EVERY TAX-CUTTER IS STIRRING

BY ROBERT KUTTNER

Even Rostenkowski. Suddenly, both parties have embraced the idea of a cut to stimulate the economy. But the upcoming debate may be short on clear political choices or sound economic policies

With the holidays coming, Congress and the President are now arguing whether, when, and how to bestow a tax cut. Herewith, a guide to the economics, the politics, and the seasonal risks.

In this opening round, both parties have accepted different versions of the same premise: that a tax cut would stimulate the economy. That assumption, however, is questionable economics. A tax cut that widened the budget deficit would be stimulative because it would increase total spending, but most economists think the economy has overdosed on that brand of stimulation. Indeed, if a large increase in the deficit spooked the bond market, it could be a net economic loss. On the other hand, a "deficit-neutral" tax cut—the more likely outcome—would be only mildly stimulative, depending on who received it and how the revenue loss was offset.

There are sharp ideological divisions between the parties. The Republicans, especially the Jack Kemp/supply-side wing, argue that capital-gains cuts would be the most effective recovery tonic, because they would boost investment and growth. They even contend that such cuts would mostly pay for themselves. By sheer repetition, supply siders have widely implanted the idea that a capital-gains tax cut is by definition a growth measure. This claim, however, is growing threadbare. In a recent speech in Boston, Vice-President Dan Quayle announced on network TV that he was going to refer to the current downturn as the "Mitchell recession." Why? Because the Democrats, led by Senate Majority Leader George J. Mitchell of Maine, have failed to enact capital-gains cuts and are hence responsible for the recession. "Mitchell recession" does not exactly resonate as a convincing explanation.

SOAK THE RICH? Democrats, on the other hand, have seized on "middle-class tax relief" as a political winner. During the 1980s, the middle class did indeed end up with a net tax hike because of increases in payroll taxes and state and local taxes, while those in the top 5% enjoyed significant real tax cuts. If the choice is tax relief for the rich vs. tax cuts for the middle class, the middle class should win hands down. After being intimidated by rhetoric branding them as the soak-the-rich party throughout the 1980s, the Democrats last year began waking up to the fact that soak-the-rich might not be bad politics.

A year ago, the Democratic congressional rank and file revolted against the leadership's budget deal, demanding revisions that did more for the middle class and hiked taxes slightly on the well-to-do. Next, Representative Thomas J. Downey (D-N.Y.) and Senator Albert Gore Jr. (D-Tenn.) sponsored legislation that would give tax relief to working families, substituting a refundable tax credit for the current personal exemption. To pay for it, Downey-Gore adds two new top brackets. On balance, some 134 million Americans would get a tax cut—but 15 million would get increases. The plan would be deficit-neutral.

House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.) initially resisted this approach as busting the Tax Reform Act of 1986, which he co-authored, and as inviting Christmas-tree amendments. But in October, "Rosty" offered his own variation on middle-class tax relief paid for by increasing taxes on the rich. Rostenkowski would give wage earners a $400 credit against Social Security taxes and pay for it by adding new top brackets. "If you're a middle-class American, you get a tax cut," said Rosty, the workingman's friend. "If you're in the top 1%, you get a tax increase."

GLITCHES. This approach, also deficit-neutral, would arguably be stimulative because wage earners would be more likely to rush out and spend the money—but at best it would be only mildly stimulative because it would withdraw income from the well-off, who are also pretty fair spenders. Even though the Rostenkowski approach seems better politics—and perhaps better economics—than Dan Quayle's, several glitches are evident. The Democrats are by no means united. Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.), for one, is partial to an approach that would give a little something to everybody: individual retirement account (IRA) inducements to boost savings, a little help for homeowners, a token children's tax credit, and perhaps even a dash of capital-gains relief. Speaker of the House Thomas S. Foley (D-Wash.), for another, has signaled that he might well split the difference with the President in order to get a bill.

As a recovery measure, increased borrowing to finance public investment would be far better than either capital-gains relief or even middle-class relief, since all the money would directly stimulate the economy. But the coming debate is unlikely to produce either clear political choices or sound economic policies. Rosty is right to be worried that Christmas is coming. With Congress and the White House competing over who can provide the first, most, and best tax relief, there is a risk that the eventual bill will muddy the differences between the parties, cost the Treasury a lot of money, and not necessarily even stimulate the economy. Everybody, sing: Deck the halls with boughs of folly....Bah, humbug.

ROBERT KUTTNER IS CO-EDITOR OF *THE AMERICAN PROSPECT* AND AUTHOR OF *THE END OF LAISSEZ-FAIRE*

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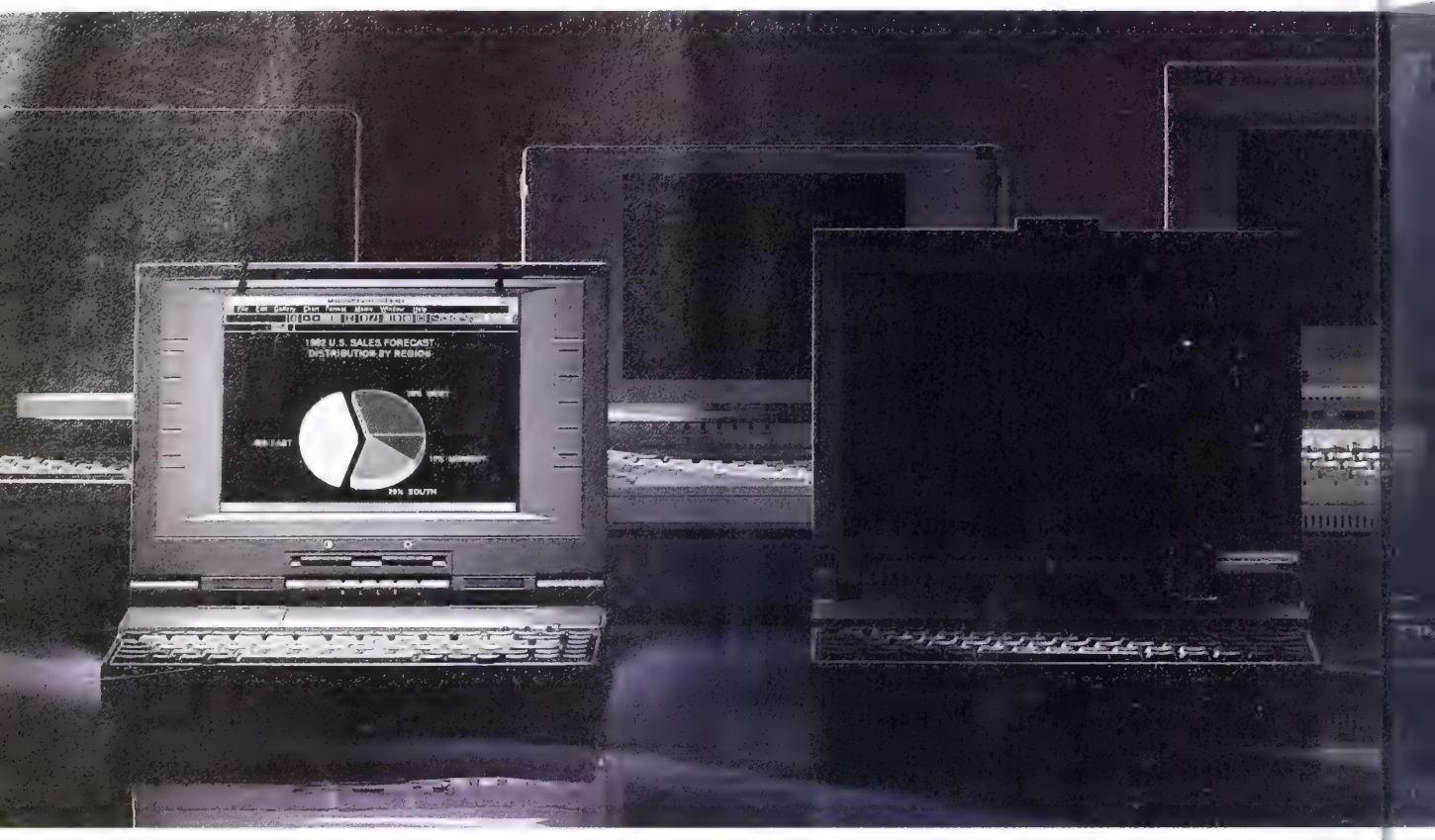

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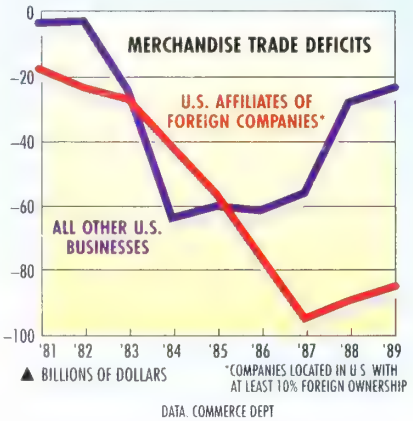
ENE KORETZ

WILL DIRECT FOREIGN INVESTMENT HELP ON THE TRADE FRONT?

Although fears about the economic effects of growing foreign ownership of U. S. companies are hardly subsiding, most economists argue that such cross-country direct investment is a "positive sum game," benefiting foreign investor and host country alike. Foreign companies, they say, have not only provided the U. S. with vital investment funds but also have boosted the competitiveness of their U. S. affiliates through enhanced capital spending and transfers of technology and expertise.

While this implies an eventual positive effect on the U. S. trade balance, a recently released Commerce Dept. review of foreign direct investment trends in the U. S. provides scant evidence of such an effect. As the chart indicates, U. S. affiliates of foreign companies (American companies with at least 10% foreign ownership) have accounted for an ever-rising share of the merchandise trade deficit—hitting 78% by 1989, the last year for which data are available.

FOREIGN-OWNED FIRMS: A KEY TO THE TRADE DEFICIT



DATA: COMMERCE DEPT

To be sure, much of the deficit is related to a rise in imports by wholesale affiliates of foreign companies—presumably purchased or set up expressly for that purpose. Still, foreign manufacturing companies in the U. S., especially Japanese-owned ones, continue to run trade deficits. A recent study by James Orr of the Federal Reserve Bank of New York, for example, estimates that in 1990, four industries with heavy foreign direct investment—autos, steel, chemicals, and electronics—ran trade deficits with their primary investing countries that equaled 42% of the entire U. S. merchandise trade deficit.

Many economists think this pattern will inevitably change as foreign affiliates grow increasingly competitive. Commerce reports that such affiliates spend far more than their domestic counterparts on plant and equipment—$12,200 per worker in 1988, for example, compared with a manufacturing average of $8,400. They also invest more on research and development and post faster growth in output.

The problem is, foreign-affiliated manufacturers tend to purchase inputs from abroad. According to a study published by the Institute for International Economics a few years ago, the average foreign company buys more than twice the value of imported inputs per worker—capital goods, supplies, components—than the average U. S. company, and Japanese manufacturers import more than four times as much.

The Fed of New York's Orr predicts that this dependence on foreign suppliers will decline over time as the enhanced competitiveness of foreign-affiliated manufacturers leads to a growing displacement of imports and expansion of exports. By 1995, he says, the surge in foreign direct investment in U. S. manufacturing operations in the late 1980s could result in a $25 billion improvement in the trade balance from its projected level without such investment.

If an improvement fails to materialize, of course, the clamor by protectionists to stem the foreign investment tide may well grow louder. But the issue is already losing some urgency. Commerce reports that such direct investment increased by only $30 billion in 1990, less than half the average increase during the previous three years, and the slowdown appears to be continuing.

AGING BABY BOOMERS: A BIGGER IMPACT ON ELECTION DAY

Demographic trends may help translate economic woes into votes in the coming Presidential election. An issue of *The Numbers News* earlier this year noted that the "middle-aging of the baby boom implies that unemployment isn't for kids anymore." Back in the recession of 1982, only 26% of unemployed workers were 30 to 44. But this age group now comprises 40% of workers, and its share of the jobless last year moved up to a third.

From the standpoint of the electorate, the significance of the aging trend of the population is that the percentage of people voting tends to rise as they age. In the last Presidential election, for example, voter turnout among persons 18 to 24 was reportedly 36%; for those 30 to 44, 58%; and for those 45 to 64, 68%. In short, more people are likely to register their satisfaction—or dissatisfaction—with their economic situations than ever before.

THE SMALL-BUSINESS JOB MACHINE MAY HAVE RUN OUT OF GAS

Small businesses are starting to lose faith in a near-term recovery. The National Federation of Independent Business reports that small business optimism, which surged dramatically last spring and slipped moderately during the summer, continued to decline in October and November.

More ominous is the survey's tally on hiring. NFIB economist William C. Dunkelberg notes that small businesses were net job creators from April through the summer, but have since been net job losers. "The job-generating power of small firms, which account for the bulk of employment gains in the economy," he says, "is back in reverse."

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Of the 10 highest-cost cities, seven are in California and three, including Miami, are in Florida. As for New York, Boston, and Chicago, they rank 19, 51, and 58, respectively, registering costs 39%, 17%, and 14% above the national average. The 10 least expensive areas were smaller cities in New York, Wisconsin, and North Carolina.

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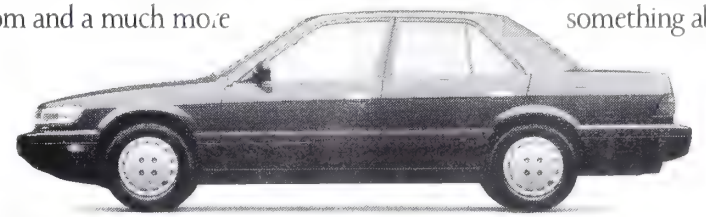

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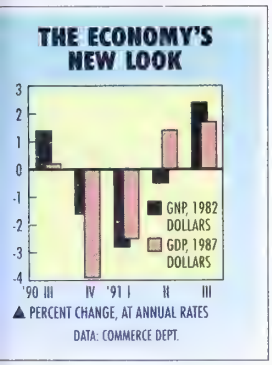
DECEMBER 16, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

NEW NUMBERS, SAME SAD STORY

On Dec. 3, White House chief economist Michael J. Boskin admitted that in recent months "the economy has turned quite a bit more sluggish." Translation: The recovery hit a brick wall last summer, and the new risks for the next couple of quarters are either stagnation or renewed recession.

Clearly, if the economy was in a recovery, it isn't any more. The reason: The post-Desert-Storm rebound failed to generate growth in jobs and incomes sufficient to sustain consumer demand. Now, the recovery process that started to come together last spring is coming unglued. Inventories aren't so lean any more, and the upturn in factory orders and production has gone flat.



The Commerce Dept.'s revised numbers on third-quarter economic growth highlight the current quarter's problems. Real gross domestic product rose at an annual rate of only 1.7% last quarter, instead of 2.5% as first reported. Growth was lower despite a much larger contribution from inventory growth than originally thought. However, final sales fell 0.9% instead of rising 0.7%. Consumer spending and business investment were revised sharply lower.

Commerce's latest report included another of its rewrites of history. From now on, the government will measure economic growth using gross domestic product instead of gross national product. GDP captures growth within U. S. borders, while GNP includes U. S. operations abroad. The two measures are virtually the same.

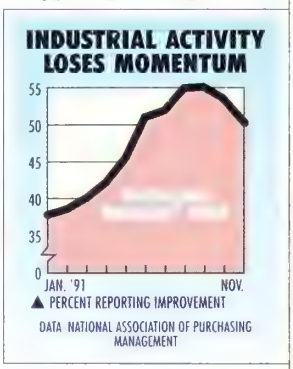
Also, the government included its annual benchmark revisions and switched to a base year of 1987, from 1982, for indexing prices. After this makeover, the recession looks a little deeper. The recovery, while more clearly visible, still looks unimpressive (chart).

DETROIT IS IN TROUBLE—AGAIN

The third-quarter GDP data imply that production ran ahead of demand, and with spending off to a weak start this quarter, pressure to cut back output is building. Already, sagging car sales have forced U. S. auto makers to slash their first-quarter production schedules to a pace comparable to the recessionary level in the first quarter of 1991. That's sure to be a big drag on economic growth next quarter.

But it's not just carmakers that are under pressure. Factory orders for durable goods rose 3% in October, but they had fallen 4.2% in September and 4.1% in August. And orders began the fourth quarter well below the third-quarter average.

Things didn't look much brighter in November, according to the National Association of Purchasing Management. The NAPM's index of industrial activity fell to 50.1% last month, the second consecutive drop (chart). Since a reading of 50% is the dividing line between expansion and contraction in manufacturing, the index says that the factory sector has stopped growing.



The NAPM said that weaker production and a third consecutive easing in new orders suggests anemic growth for the immediate future. Some members indicated that inventories were higher because output and orders were lower than expected. And some said that recently announced price hikes were either rescinded or delayed, indicating weakening demand.

The recovery's struggle is best captured by the government's index of coincident indicators. This composite of industrial production, employment, incomes, and business sales fell 0.2% in October, and it has been sliding lower since hitting a peak in July (chart, page 24). The index has now lost a third of the gain it had made from March to July, and it shows that economic activity began the fourth quarter below the third-quarter level.

Moreover, the index of leading indicators suggests no improvement for a while. This forward-looking gauge edged up only 0.1% in October, after dipping 0.1% in September, and it is no higher than it was in July.

The recovery's problems may force the Federal Reserve into action again. The Fed's latest regional survey of business conditions reported "flagging momentum in the economic recovery in October and early November." The report fuels speculation that the Fed will vote at its policy meeting on Dec. 17 to cut interest rates further.

CONSUMERS CRAWL INTO A HOLE

The economy's future hinges on consumers, since their spending supports two-thirds of output. The trouble is, it looks as if consumers plan to hibernate this winter. They have plenty of reasons: few new jobs, weak income growth, debts that are becoming harder to repay, and the lowest confidence level in more than a decade.

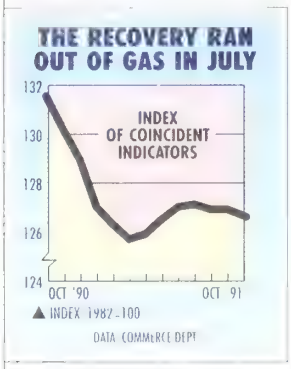
The chief problem is weak income growth. Personal income rose by 0.2% in October, but special payouts

ERIC HOFFMANN/BW

including farm subsidies and bonus payments to auto workers pushed up earnings. Excluding all unusual factors, personal income fell by 0.1%.

Wages and salaries were down in October, as was interest income. Not surprising in this stalled economy, the fastest-growing segment of income is government transfer payments. They're up almost 10% from last year. And such income will get a further boost, probably in December, as those qualifying for extended jobless benefits start to receive unemployment checks again.

Still, today's growth in earnings is too tepid to support much new spending in coming months. After accounting for taxes and inflation, real disposable income rose just 0.1% in October. And that came after no growth in the third quarter. Before the government's revisions, real income had shown a 2% gain, at an annual rate.



It's little wonder, then, that real consumer spending fell by 0.4% in October. Also, September's data were revised down to show only a 0.4% gain, instead of the previously reported 0.6% rise. This means that spending began the fourth quarter about 1% below its third-quarter pace, at an annual rate.

Judging by November car sales, consumer spending hasn't snapped out of its October doldrums. Sales of U. S.-made cars picked up a bit in late November, but the monthly total languished at the October pace of about 6 million.

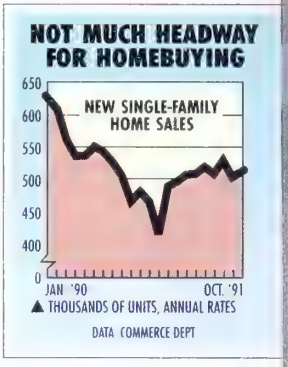
A reversal of what looks like a new round of retrenchment by consumers will not be easy in the face of slack hiring, meager pay raises, and low confidence. Also, households have a huge pileup of past borrowings that must be repaid and little savings. Consumers socked away just 4.4% of their disposable income in October.

Also, a growing number of households are unable to repay their existing debts. According to the Mortgage Bankers Assn., the percentage of mortgages that haven't been paid in 90 days or more jumped to 0.85% in the third quarter, from 0.78% in the second. These delinquencies are usually precursors of foreclosures.

FALLING RATES DO LITTLE FOR BUILDING

Mortgage problems are rising despite falling interest rates. And lower borrowing costs aren't attracting as many buyers as in past upturns. In October, new single-family homes sold at a 513,000 annual rate, up 2.2% from September (chart). And the September sales pace was revised upward to 502,000, from the disastrous 446,000 first reported. That change suggests that housing isn't in as much trouble as thought a month ago.

But sales are not showing the same momentum as in the past. For example, the last time 30-year fixed mortgages rates fell below 9%, back in 1977, new homes were selling at a vibrant 800,000 annual rate.



Builders have kept the supply of unsold homes lean, and so housing starts are still climbing. But until home buying shows more strength, the building industry won't add much support to this economy. Construction is recovering, but it has a long way to go. Construction spending rose 1% in October, to an annual rate of $411.5 billion. But outlays are 5.3% below year-ago levels, which were 2% below the previous year.

Unlike the rest of the economy, the building industry has improved since the summer. Real outlays are up at an annual rate of 10.6% since July. However, it was consumers who threw up the brick wall that stymied the recovery. And the economy cannot move forward until consumers are ready—and able—to tear the wall down.

THE WEEK AHEAD

PRODUCER PRICE INDEX

Thursday, Dec. 12, 8:30 a.m.
Producer prices of finished goods probably edged up by just 0.2% in November, according to economists surveyed by MMS International, a division of McGraw-Hill Inc. Prices had jumped an unexpectedly large 0.7% in October, because of a runup in energy prices and problems in the seasonal adjustment of prices of consumer durable goods. As a result of the adjustment quirk, producer prices, excluding food and energy, surged by 0.5% in October. However, the MMS consensus expects that nonfood, nonenergy prices rose by only 0.2% in November. Even with the jump in October, inflation at the producer price level is exceedingly tame. Prices are unchanged from a year ago.

RETAIL SALES

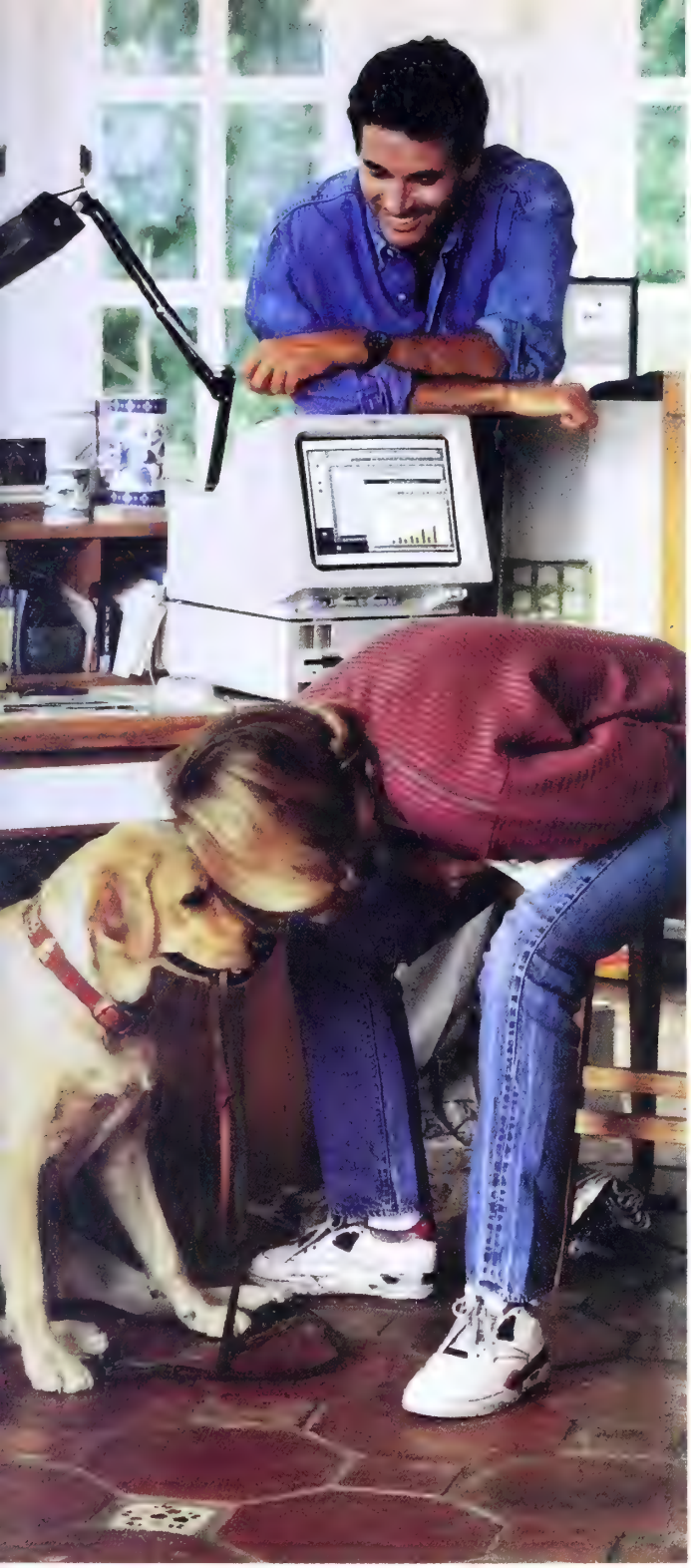
Thursday, Dec. 12, 8:30 a.m.
Retail sales were little changed in November, says the MMS report. In October, they fell by 0.1%. The November weakness is suggested by falling car sales. However, even excluding auto sales, store receipts are expected to rise only 0.1% in November, after no change in October. Nonauto retail sales haven't increased since July.

CONSUMER PRICE INDEX

Friday, Dec. 13, 8:30 a.m.
Consumer prices likely rose by 0.3% in November, after edging up 0.1% in October. The MMS consensus is that the core consumer price index, which excludes food and energy, also advanced by 0.3%, after a mere 0.1% gain in October.

BUSINESS INVENTORIES

Friday, Dec. 13, 10 a.m.
Inventories held by manufacturers, retailers, and wholesalers probably grew by 0.2% in October. That would be a slower accumulation than the 0.6% increase posted in September. In that month, retail stock levels jumped 1.5%—an ominous turn because stores were trying to keep inventories in check before the onset of the holiday shopping season. Business sales were likely to be up by 0.2% in October, after rising 0.6% in September.



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DECEMBER 16, 1991

GLOBAL CHILL

NOW, EVERY INDUSTRIALIZED NATION IS SLOWING

Pessimism is contagious. And right now, all the industrialized world seems to have caught the gloom.

A nascent summer rebound in the U. S. economy stalled as companies slashed payrolls. Now, Germany and Japan foresee little economic growth in the second half. Britain's recovery hopes are dimming as housing repossessions by banks reach new highs. France is sliding downward, and in Canada, signs of strength are nearly invisible. As Nancy R. Lazar, economist at International Strategy & Investment Group Inc., puts it: "At the moment, it's hard to find an engine of growth anywhere in the world."

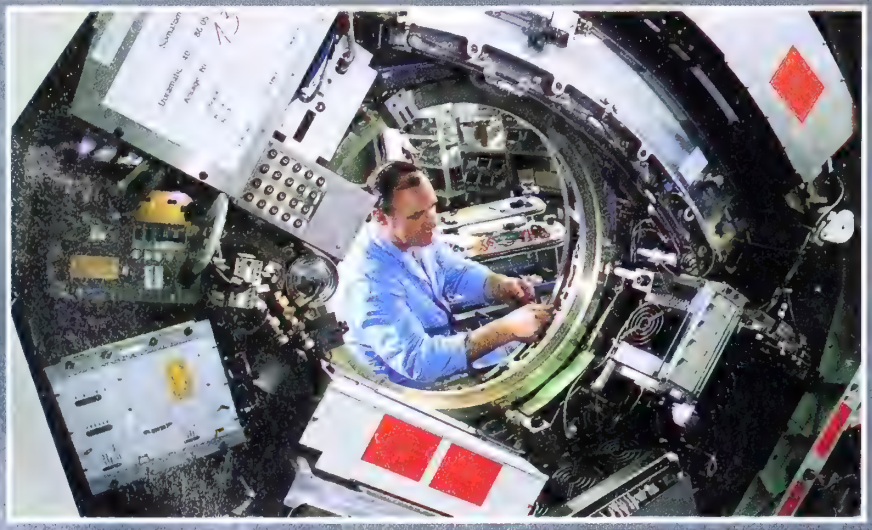
What's going on? In two words, tight money. Inflation-fighting central banks in Germany and Japan have pushed up interest rates, squeezing growth. The Germans are firm in their high-interest-rate stance for now. But with the world economy weakening, central bankers, first in the U. S. and Canada, more recently in Japan, are starting to reverse course and show a "bias toward further monetary easing and lower interest rates," says William P. Sterling, manager of international economics at Merrill Lynch & Co. Trouble is, that change in course won't help soon. At best, the industrialized world may eke out 1% to 2% growth next year.

That's bad news for U. S. businesses, which have been counting on exports to plug the hole in domestic demand. And with all the industrialized countries having become more dependent on foreign trade over the past 10 years (chart), a slowdown these days comes without borders. "A lot of the current country forecasts are counting on an acceleration in exports to boost growth," frets Richard Freeman, chief economist at Imperial Chemical Industries PLC, the mammoth British chemical company. "I can't see where in hell the export surge is going to come from."

PROTECTIONIST PATH. The upshot: With almost every industrialized nation's economy weakening and the former Soviet empire's economies crumbling fast, a full-scale global recession becomes a risk. And if economies don't bounce back soon, politicians may begin erecting trade barriers—just as they did early in the Great Depression. "In a stagnant world economy, protectionism in a variety of forms is a major economic risk," says Gail Fosler, chief economist at the Conference Board. Protectionism could lead to a global contraction.

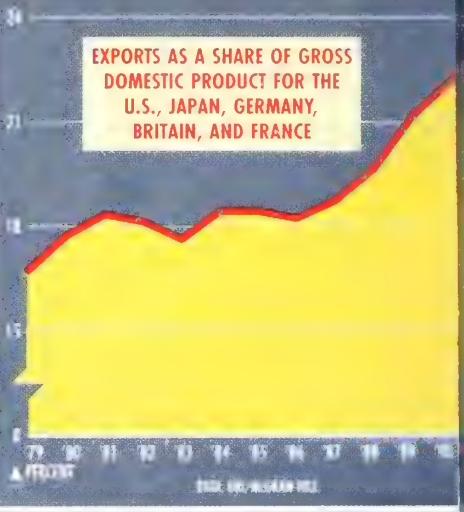
Bright spots exist, no question. Mexico has been expanding at a 4.5% rate this year. Latin America as a whole could grow 5% in 1992. The Asia-Pacific area, excluding Japan, should still manage a healthy 6% pace next year. Just the same, none of these areas has the

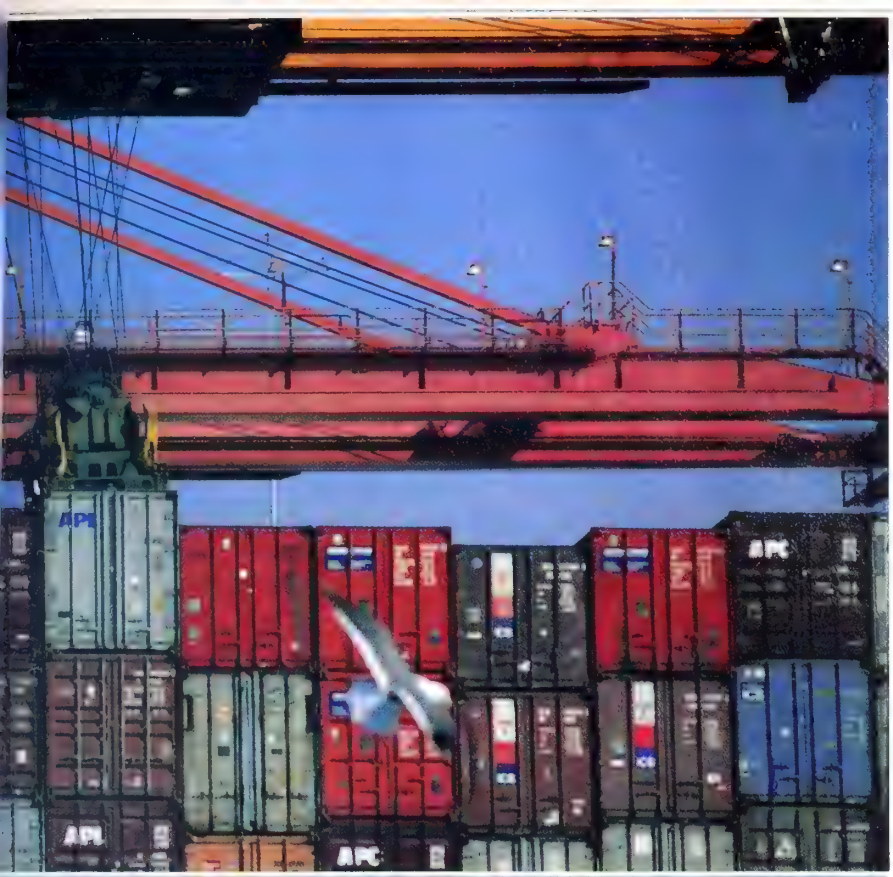
LOADING GOODS ONTO SHIPS IN LOS ANGEL



A SIEMENS TECHNICIAN IN GERMANY'S ECONOMY IS EXPECTED TO GROW BY JUST 1.8% IN 1992

AS ECONOMIES INTERTWIN





S. CAN'T COUNT ON EXPORT GROWTH TO MAKE UP FOR SLUGGISHNESS AT HOME

neft to get the world economy moving again, says Eric Tazé-Bernard, senior economist at Banque Indosuez in Paris.

The global economy is in a much tougher spot than many expected only a few months ago. Slowing growth in Germany and Japan was supposed to be offset by a sustained recovery in the U. S., Canada, and Britain, all of which went into recession much earlier. Overall, the world economy should have chugged merrily along as different countries went in and out of their business cycles at different times.

But the recoveries in the English-speaking world have turned out to be much weaker than expected, while the downturns in Europe and Japan may very well be deeper. The German engine of growth is wheezing: The economy is expected to grow at a 3.3% rate for all of 1991, but only 1.8% next year, according to Hans-Jürgen Meltzer, economist at Deutsche Bank in Frankfurt.

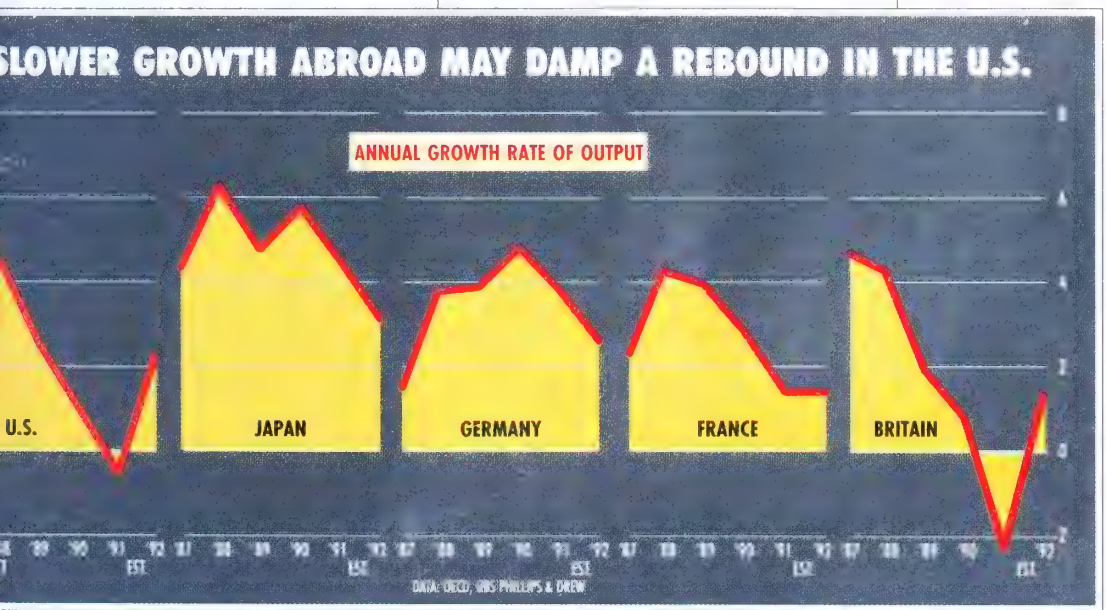
Right now, German output may actually be falling as the economy stumbles under the burden of high interest rates, slowing exports, and the huge costs of reunification. Recent union wage settlements, such as the 6.7% increase negotiated by Volkswagen's employees and the 8% gain for brewery workers, have raised fears of a wage-price spiral. Germany's central bankers seem set to keep interest rates up until inflation comes down from its expected peak of 5% early next year.

PROFIT SQUEEZE. With other European countries yoked to Germany's monetary policy, they are being forced to keep their interest rates high as well. France, for example, tried to stimulate its moribund economy by cutting interest rates on Oct. 18. A month later, after the French franc plummeted against the German mark, it was forced to raise rates once again. Britain, too, is being faced with the unpleasant prospect of raising interest rates, even though unemployment is at 8.7% and still rising. Many smaller European countries are hurting, too.

While Europe slows down, so does Japan. The stock market is down 4.9% since last January. Corporate bankruptcies are at record levels, banks are pulling back, and third-quarter pretax profits are down 12% compared with a year ago. Since July, the economy actually may have contracted, estimates Tetsuo Tsukimura, chief economist at Smith Barney, Harris Upham International Inc. in Tokyo. Many economists expect 2% growth or less in 1992.

Sluggish growth overseas is darkening the U. S. outlook. Without export growth, the gross domestic product would have declined by 1.7% over the past year, almost twice its actual 0.9% drop. That export support now figures to wane in coming months, especially as Canada and Europe, which take about half of U. S. exports, slow. The global slowdown may drag down corporate profits next year, since more than a fifth of profits flow from operations abroad.

And as economies slump further, the risk grows that each nation or regional trading bloc will try to boost exports at another's expense. Over the past six months, real imports to the U. S. have surged at an annual rate of 18%, raising suspicions that some foreign companies are boosting ship-



into the U. S. to offset weakness at home. "Japan is becoming far more export-aggressive," says Roger Kubarych, manager at Henry Kaufman & Co. Since May, Japan's monthly trade surplus with the U. S. has grown by 72%.

To spur their economies and defuse protectionist pressures, many central bankers have already begun encouraging lower rates. And most have room to ease further as inflation heads lower. Since January, the Federal Reserve has cut short-term rates by a third, and Canada's central bank has also slashed rates since mid-1990. The Bank of Japan recently relaxed monetary policy, and further easing lies ahead. The Germans, ever fearful of inflation, will be last. But if prices don't flare up, they should soften their tight-money stance soon.

Lower interest rates won't be in vain. With a little luck, world growth will kick into gear sometime later in the year. But around the gloomy globe, the coming winter is looking rather chilly.

By Christopher Farrell and Michael J. Mandel, with John Templeman in Bonn, Robert Neff in Tokyo, Mark Maremont in London, Stewart Toy in Paris, and bureau reports

Commentary/by Karen Pennar

IT'S TIME FOR THE GROUP OF SEVEN TO ACT AS A GROUP

Growth rarely happens as planned or hoped. Today, all three of the industrialized world's powerhouses are weak or weakening and the global economic outlook is dimming. Already, some economists are calling for a coordinated response to the widening slump. That call should be heeded, despite the difficulty that government officials have had in building consensus across borders. The alternative—inaction or overreaction—carries too many risks.

As recently as the 1970s, cooperation meant that the U. S. took the lead in spurring growth by easing monetary and fiscal policies, while Germany and Japan followed reluctantly, hoping to garner the fruits of growth without the penalty of rising prices. The strains of the 1980s, though, and the growing heft of America's major competitors, culminated in more genuine cooperation. The Group of Seven industrialized nations collaborated in 1985 in bringing the dollar down from its lofty heights, and West Germany, Japan, and the U. S. coordinated a series of interest-rate cuts in 1986. But the financial markets weren't always convinced, and for domestic reasons officials haven't always wanted or been able to deliver the policy changes needed to correct economic imbalances. So seizures such as the October, 1987, stock market collapse have struck.

DANGEROUS SHOCKS. Still, however flawed, cooperation may be better than the alternative—the chaotic and unbridled pursuit of self-interested national economic policies. "It's time for the G-7 to go back to what they were doing in 1986 and coordinate a series of interest-rate cuts," says C. Fred Bergsten, director of the Institute for International Economics in Washington. Germany, he says, should couple monetary easing with fiscal tightening, because assistance to the eastern part of the country has pushed the budget deficit up. Japan, meanwhile, could afford both monetary and fiscal ease, since the combined national and local budgets there are in surplus. The U. S., for its part, should keep cutting rates. Otherwise, says Bergsten, the global economy will remain sluggish at best.

More worrisome, a shock could send it reeling into recession. In the past, oil shocks have dealt body blows. In the 1990s, there's the danger that the disintegrating Soviet empire, characterized by ethnic strife, uncertain leadership, and economic chaos, could do similar damage. "People just aren't focusing enough on what's happening there," says Steven H. Nagourney, senior vice-president at Shearson Lehman Brothers Inc. The turmoil could easily spill over into Europe, and the financial markets might quickly convulse.

With the destructive potential for such a shock lurking, economic officials should be laying the groundwork for more cooperation. "We've got extremely fragile economic conditions," says Gail Fosler, chief economist at the Conference Board. "You'd think that there would be a desire to get a coordinated response together." Instead, says Fosler, the Japanese are saying that they'd be content with a stronger yen, while the Germans remain fixated on reining in inflation. Even absent a shock to the system, this go-it-alone strategy could cause problems. Fosler's immediate fear is that German and Japanese hesitation to ease will prompt an American overreaction. An aggressive pump-priming tax package, aimed at getting money into consumers' pockets and out of them in a hurry, could reverse the narrowing of the trade deficit. And longer-term, it could be inflationary.

The classic case against coordinated easing is that it could well fuel price increases. Price stability is a legitimate concern in Germany, where inflation, at 3.5%, is running higher than in neighboring France for the first time in 25 years. But for much of the industrialized world, prices are relatively stable, and inflation is no longer considered a serious threat.

More compelling is the argument that each of the major industrial nations is faced with unique problems that demand specific solutions. The U. S. is working out debt-induced structural difficulties, Japan is bursting the bubble of inflated land prices, and Germany is integrating its eastern region into the economy. That's all true. But addressing those domestic problems shouldn't preclude facing international responsibilities. It might just be healthier for both the U. S. and the world if central bankers and finance ministers would agree on a little judicious and concerted monetary easing.

THE PRIOLAS AND THEIR STABLE: THEY'RE HANGING ON TO THE FOUR-YEAR-OLD MINIVAN

WHY A RECOVERY WON'T SHIFT DETROIT INTO OVERDRIVE

Even with fat wallets, folks will have good reasons not to buy new cars

With wear and tear from three children beginning to show on Phyllis and Joseph Priola's 1987 Dodge Caravan, the suburban Chicago family was thinking of trading in the minivan. But the economy is still sluggish, and they have two other cars to fall back on, so they're standing pat. "We're not going to make any more big investments right now," says Phyllis.

The Priolas are in good company. Millions of potential car buyers have hung on to their old wheels in the past year and a half, sending car sales skidding. In November, they fell 7% below last year's already depressed level. And an upturn seems as distant as ever. "We're likely to see consumers remain very cautious spenders," says Richard T. Curtin, a University of Michigan economist whose November survey of consumer confidence hit its lowest point since the Persian Gulf war.

COMES LOADED. Traditionally, a prolonged sales drought creates pent-up demand. When the economy gets moving again, consumers come back in a flood. With many of the 31.4 million cars and trucks sold in the boom years of 1985 and 1986 overdue for replacement, that demand may be as high as 4 million cars and trucks, estimates John V. Kirnan, an analyst with Kidder, Peabody & Co. in New York. And again, carmakers are hoping for a tidal wave of buying, once the economy gets off dead center.

This time around, though, that bulge in demand may be part mirage. High prices put many new cars out of reach of debt-laden consumers. Better quality in the 1980s means cars don't need to be replaced as often. And used-car sales are booming. All that means new-car sales "are not going to be leading us out of the recession, as they have in the past," says Thomas C. Webb, chief economist with the National Automobile Dealers Assn. Faced with that gloomy outlook, carmakers are paring back production.

Most of the problem comes down to money. New cars are crammed with expensive features such as airbags, antilock brakes, and fancy new electronics. The extras have boosted the average cost of a car to more than $16,000, twice the figure of a decade ago. And paychecks haven't kept pace. It now takes the average family 24.5 weeks of gross income to pay for a new car, up from 18.7 in 1980, according to the Commerce Dept. On top of that, consumers are still crushed by short-term debt.

Buyers often can't come up with the needed downpayment, either. In the past, the trade-in on an old car often did the trick. But the popularity of long-term loans in the 1980s means that cars sometimes lose their value just as fast as consumers can pay the loan off. The owner trading in an average 1988 car would net only about $850 after paying off a five-year loan, figures Webb. That's just 5% of the average cost of a new car and well below the 20% downpayment that many banks and credit companies require these days. Rebates often don't make up the difference.

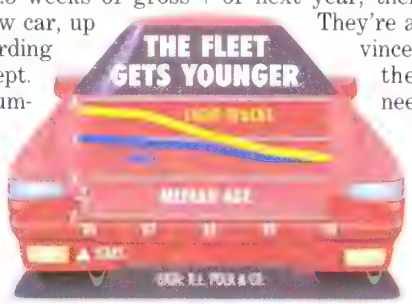
Auto makers themselves are partly responsible for undercutting demand. Easy credit from captive finance arms in the late 1980s artificially propped up sales. Also, to keep factories running, auto companies now regularly push more than a million new cars a year through daily rental fleets. The vehicles show up at dealerships four to six months later as "nearly new" used cars. All those late-model vehicles on the lots have created a robust used-car business that steals new-car sales. As a result, the median age of cars on the road has fallen to 6.5 years (chart), not enough to generate strong demand.

LESS RUST. Those cars and trucks last longer than ever, too, making it easier for consumers to put off purchasing a new one. Auto makers beefed up rustproofing during the 1980s, so road salt doesn't eat away as many auto bodies. And defects are one-fifth what they were a decade ago, meaning cars break down less frequently than they used to. "A six-year-old car today is [still] a pretty darn good automobile," says George C. Peterson, president of Auto-Pacific Group, a California-based market researcher.

With the sales outlook so dismal, manufacturers are rolling back production goals. In late November, U. S. auto makers, including Japanese-run transplant factories, cut 184,000 cars and trucks from their first-quarter schedules, a 7.3% reduction, according to *Ward's Automotive Reports*, a trade weekly. The cutbacks will make it very hard for the Big Three to make money in the first quarter, since profits are booked when cars are built, rather than when they leave the showroom.

Still, auto executives remain confident that sales will pick up in the second half of next year, then really jump in 1993. They're assuming they can convince customers such as the Priolas that they need—and can afford—a new car. Even if the economy perks up next spring, that's a dubious assumption.

By David Woodruff, with James B. Treece, in Detroit



PHOTOGRAPH BY MICHAEL L. ABRAMSON; CHART BY ROB DOWE/BW

WITH SUNUNU OUT, NEW IDEAS COULD COME BLOWING IN

The shakeup should ventilate the White House's arid intellectual climate

Call it the thud heard round the Beltway. Big, bad John H. Sununu was a towering figure in the Bush Administration's power pyramid. So it should come as no surprise that his downfall as White House Chief of Staff, hastily announced on Dec. 3, will reverberate in Washington for months.

For starters, Sununu's removal gives President Bush a chance to revamp a fumble-prone White House staff. That could help him arrest a political free-fall that has sent his poll ratings plummeting 40 points in 10 months. It also paves the way for formation of a Sununu-less campaign team.

But the sharpest aftershock of Sununu's tumble won't be felt until the fascination with White House job-hopping ebbs. Simply put, the staff chief's departure—he'll stay on as a figurehead counselor until March—will break the policy hammerlock exerted by Sununu and Budget Director Richard G. Darman. The move also could expose Bush to a commodity that has been in short supply in his Administration: fresh ideas. Says a senior GOP strategist: "This breaks the logjam."

MORE FIRE. Together, the "Mensa twins" dominated Bush policymaking, wielding control over taxes, the budget, environmental regulation, science policy, and most other domestic and political matters. The budget director has come under renewed fire from GOP conservatives and will have to devote most of his legendary wiles to saving his job.

Transportation Secretary Samuel K. Skinner, a top contender for the staff chief's job, is a back-slapping, lapel-grabbing pol without Sununu's ideological rigidity or intellectual pretension—and he still nurses a grudge over rough treatment at Darman's hands. "Darman has to be the most nervous man in Washington right now," says Steven Schier, a Carleton College political scientist.

Denied the Sununu connection, Darman will have a tougher time dominating Cabinet meetings and insulating the President from outside policy advice. Already, business leaders and Hill Republicans are counseling Bush to take more aggressive action to jump-start the economy, though Bush is resisting. And nervous GOP political pros are urging a serious White House commitment to tackling the problems of inadequate health insurance and other festering domestic ills. Sununu and Darman tended to view such issues as "second-term concerns."

Bush badly needs a "new breeze" to ventilate the arid intellectual climate of his Administration. The best indicator of whether fresh currents are wafting will come in late January, when the President delivers his State of the Union address. Bush is under pressure to unveil new policies to boost investment, provide tax relief for the middle class, and contain health costs. But with Darman fixated on the $360 billion deficit, Bush focused on foreign policy, and the White House staff in disarray, the early line on the State of the Union was to expect an artful repackaging of shopworn ideas.

'Bush has every businessman in America mad at him,' says one longtime Presidential adviser. 'He needed a fresh slate'

That may change now that Sununu has been elbowed aside and Bush is facing a fight for political survival. Already, White House aides are leaking word that their concerns about the deficit may be shelved for a while, and that the State of the Union may call for expanded health insurance and "temporary" middle-class tax cuts. Says a longtime Presidential adviser: "Sununu was bright, but not politically smart. It began to look like he was running the country. As a result, Bush has every businessman in America mad at him. He needed a fresh slate."

If Skinner steps up to the job of staff chief, that's exactly what Bush will get. A former Illinois transportation official, Skinner first attracted attention as a crusading U. S. Attorney. Politically astute and well-connected, he played a key role in Bush's campaign drives in Illinois. Skinner lacks Sununu's ability to marshal facts and absorb complex data. But he's also lacking Sununu's unerring ability to alienate Bush allies in Congress. "Skinner is very pragmatic," says Mary Matalin, chief of staff at the Republican National Committee.

NO MIRACLES. That's not to say that Skinner, who had not been offered the staff chief's job in the immediate wake of Sununu's resignation, represents some miracle cure. White House aides caution that he is a day-to-day problem solver. Says a senior Administration official: "He's not someone who is in any evident way interested in policy." And right-wingers, who felt a natural kinship with Sununu, are suspicious of Skinner's mainstream views.

Ultimately, the key test for Skinner—or any Sununu successor—won't be how well he or she fares at Capitol Hill schmoozing. The test will be taking a President who is uncomfortable with domestic matters and accustomed to delegating domestic decisions to a narrow group of subordinates and getting him to tune in to the cries of distress from the heartland. If Sam Skinner can pull that one off, he'll easily surpass Sununu on the political IQ charts—and help his boss get reelected, too.

By Douglas Harbrecht, with Lee Walczak, in Washington

THE DEMOCRATS DRAG AN OLD NOSTRUM OUT OF THE ATTIC

The investment tax credit, a time-honored recession remedy, is back

It's tanned. It's rested. It's ready. The investment tax credit, the Democrats' favorite business incentive, may be due for a comeback.

First enacted in 1962 as a way to prime the economic pump, the ITC has slipped in and out of the tax code seven times in the past 30 years (chart). It was most recently repealed in the 1986 Tax Reform Act, after critics charged that much of the $30 billion-a-year revenue loss went to subsidize investments that would have been made anyway. But business lobbyists, mindful of the credit's history, predicted it would return with the next recession.

They may have been just a few months off. Democratic Presidential hopefuls, including Arkansas Governor Bill Clinton, and congressional Democrats such as House Ways & Means Committee members Sander M. Levin of Michigan and Frank J. Guarini of New Jersey are backing a slimmed-down ITC. At the same time, Republicans such as Senate Finance Committee member William V. Roth Jr. of Delaware and some Bush Administration aides are exploring ways to resurrect the credit.

IFFY BILL. That's not to say that the unrestricted 10% ITC is coming back. That would now cost as much as $40 billion a year—money that a deficit-strapped Congress is not about to lavish on business. Instead, lawmakers are considering two approaches. One would allow the credit only for investment above a company's historical levels. Another would limit it to the purchase of manufacturing equipment. The Levin-Guarini bill, for instance, would provide a 7.5% credit only for new investment in "property integral to the manufacture of tangible property." That would save the Treasury money by ruling out such things as cash registers but would also cost it some business support.

The measure is politically iffy because it pits the service companies against manufacturers. Just consider how it would treat computers and software: A manufacturer could take a write-off for buying workstations and a computer-aided design program, but an airline couldn't get a break for upgrading its reservations system. Service-related businesses and their suppliers are not likely to embrace a costly incentive that does them no good—especially if the price is a rate hike or similar across-the-board levy to recapture lost revenues. But broadening the credit would be hugely expensive and invite abuses.

Backers of the credit are optimistic that it can be packaged with other incentives, should Congress and President Bush go for a big tax bill next year. One hope: a shotgun wedding of the investment credit and a capital-gains tax cut. Says Mark Bloomfield, president of the American Council for Capital Formation (ACCF), a probusiness lobby: "Perhaps capital gains will be the Republican growth initiative and ITC the Democratic." Such a package might be politically appealing. But will it work?

Economists, not surprisingly, are divided. Tax reformers argue that restoring the credit is another step toward undoing the 1986 act, which cut tax rates while reducing subsidies. If Congress wants to stimulate business, they say, the better approach is to cut corporate tax rates further. Let's say Congress wanted to give business a $10 billion tax break. It could either provide a limited credit or cut the corporate tax rate by three percentage points, to 31%. The reformers also argue that business investment in equipment actually increased after the credit was repealed in 1986, suggesting that optimism, not taxes, spurs new investment.

CENTRAL PLANNING? The reformers are also troubled by the idea of government getting back in the business of picking winners and losers. Says Charles McClure, a Hoover Institute economist who drafted the Reagan Administration's initial tax-reform plan: "It seems ironic that just as we are seeing the disastrous effects of politicians and bureaucrats engaging in central planning in Eastern Europe, people in Washington are trying to import the idea to the U. S."

Among those economists who believe there is a use for tax incentives, the ITC is preferred to other write-offs, including a capital-gains cut. Stanford University economist John B. Shoven, in a study done for the ACCF, reported that a 7.5% credit would reduce the cost of capital by 20% to 30%, while trimming the effective capital-gains tax rate to 20% from 28% would cut business' cost of capital by only 4.5%. "If one wants to lower the cost of capital for equipment investors," argues Shoven, "it would be hard to find a more effective option."

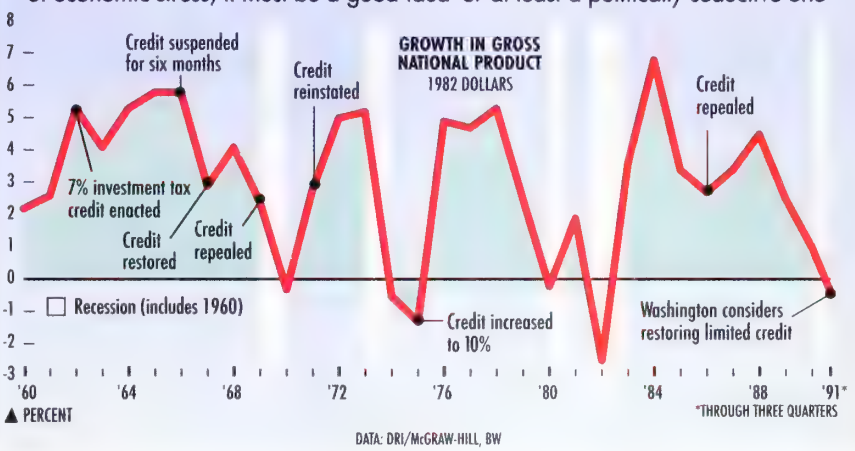
The idea of restoring the ITC is widely popular right now. Once the tax debate begins in earnest next year, however, the credit will have to compete with other subsidy schemes. Whether Congress will want to target such a costly incentive to the shrinking manufacturing segment of the U. S. economy remains to be seen. But given the credit's political resilience, it's tough to bet against it.

By Howard Gleckman in Washington

One hope: A shotgun wedding of the investment credit and a capital-gains tax cut

THE ON-AGAIN, OFF-AGAIN INVESTMENT TAX CREDIT

Classical economics teaches that the best way to fire up a stalled economy is to encourage investment. What better encouragement than a tax break for capital spending? Judging from the way Washington resorts to the ITC in times of economic stress, it must be a good idea—or at least a politically seductive one



DATA: DRI/McGRAW-HILL, BW

ERIC HOFFMANN/BW

BOB SEAY BESIDE THE PIGEON RIVER IN TENNESSEE: "IT'S AN INDUSTRIAL SEWER"

THE NEXT WAR BETWEEN THE STATES COULD BE OVER CLEAN WATER

A battle brews over pollution standards for interstate rivers

Champion International's paper mill in Canton, N. C., has financed hopes and dreams in the hamlet at the foot of the Smokies for most of this century. Today, some 2,000 workers depend on its $100 million annual payroll. The mill, in turn, relies on the waters of the Pigeon River, which winds through Canton on its way to Tennessee.

But a cloud hangs over the mill. The people of eastern Tennessee, 26 miles downstream, don't like what has happened to their river. With the help of the Environmental Protection Agency, they're fighting Champion International Corp. and North Carolina. They want Champion to clean up its act, to rid the river of what one opponent calls "the stench of rotten eggs," and to restore its color from the present coffee brown.

How to resolve such interstate squabbles will be decided in a case the Supreme Court is scheduled to hear on Dec. 11. That case, involving a Fayetteville (Ark.) waste-water-treatment plant, pits industry against the environmentalists, state against state, and the federal government against the states. The outcome could seal the fate of the Canton mill, which will have to close if Champion has to meet the tough standards. "The real issues revolve around socioeconomic decision-making and who should have the authority to reach the final decisions," says J. Jeffrey McNealey, a lawyer for Champion.

In the Fayetteville case, the city wants to continue to operate a new $40 million water-treatment plant. But the White River of Arkansas can't handle the plant's 6.1 million-gallon daily outflow, so Arkansas has won EPA approval to dump half the waste into the Illinois River, which reaches Oklahoma 39 miles downstream. Sooners, however, want the clear, spring-fed river maintained as a scenic waterway for fishing, canoeing and wildlife. "It used to be crystal clear," complains Jim Wilcoxen, general counsel of the Cherokee Nation, a 125,000-member tribe living near the Illinois. "Now, it has a lot of algae."

The U. S. Court of Appeals in Denver upheld Oklahoma's position. The court said that under the Clean Water Act, the EPA must apply higher water-quality standards in such conflicts. The decision will likely set off "a tidal wave of regional warfare between the states," warns David Norrell, a lawyer for Arkansas. It also has triggered a chorus of criticism from rural states and such interests as the timber, farming, mining, and cattle industries. "There is nothing more sacred, vital, and essential than a Western state's right to control its own resources," says the conservative Mountain States Legal Fund in a brief on behalf of numerous business interests. Also voicing concern are cities and counties, which plan to spend more than $100 billion by the end of the decade to comply with Clean Water Act deadlines.

BALANCING ACT. The EPA, meantime, argues that the Clean Water Act makes it the judge in interstate disputes. "Oklahoma may choose to protect its scenic river by barring all discharges," the agency told the high court. "But it is another question whether such a policy may be imposed by Oklahoma on Arkansas" (table).

If upheld, the appeals court ruling could lead to an overhaul of the Clean Water Act. Congress is beginning the long process of renewing the act, and one Senate proposal calls for stricter regulation of interstate waters. "Congress is still not satisfied with the level of protection given pristine waters," says Natural Resources Defense Council lawyer Jessica Landman. But, says Champion attorney McNealey, "there has to be some sort of balancing act."

It's an act the courts often have trouble pulling off. Bob Seay, co-founder of the Dead Pigeon River Council in Tennessee, an environmental group, fears that the balance has already tipped against the river. "It's an industrial sewer," he says. In western North Carolina, the townspeople of Canton fear the economic disaster that awaits them if the mill closes. About the only thing certain about this Supreme Court decision is that the issue is likely to land right back on Congress' doorstep.

By Tim Smart in Washington

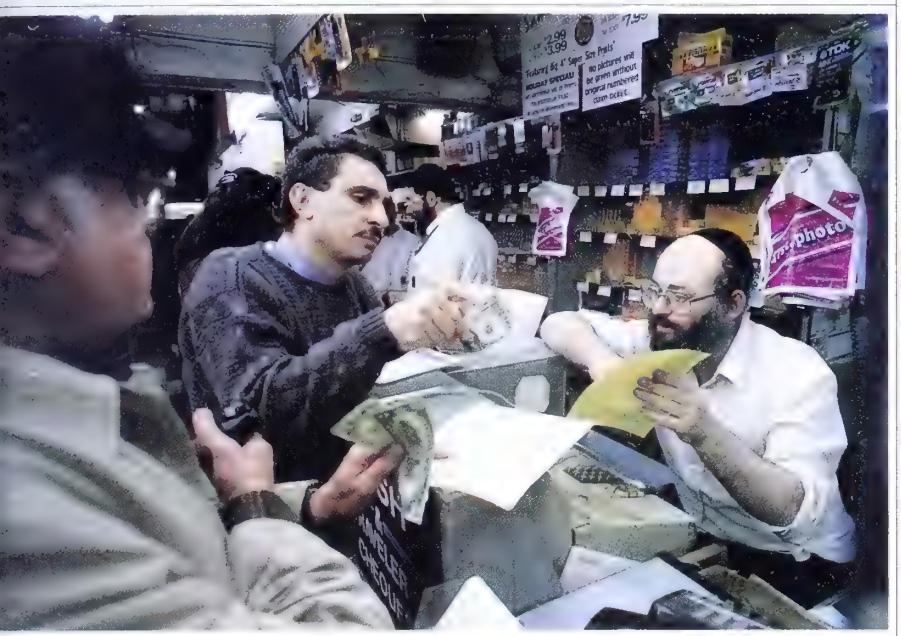
THE ISSUES IN *ARKANSAS VS. OKLAHOMA*

- Should the stricter water-quality standards of a downstream state, in this case Oklahoma, govern whether an upstream wastewater-treatment plant, in this case along the Illinois River in Arkansas, be granted an operating permit?
- Did the federal Environmental Protection Agency give adequate weight to Oklahoma's interests in issuing the Arkansas plant's operating permit?

DATA BW

47th STREET PHOTO: WHAT'S WRONG WITH THIS PICTURE?

A lawsuit and falling sales are plaguing the electronics retailer



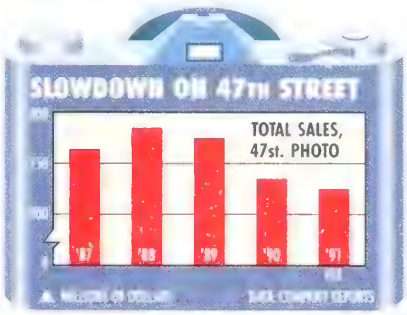
LOW PRICES ON CAMERAS AND ELECTRONIC GEAR OUTWEIGHED THE OFTEN CURT SERVICE

In the beginning, there was a camera store. As the name attests, cameras are still for sale at 47th Street Photo Inc., as are consumer electronics and even jewelry. And for 26 years, 47th Street has been a mecca for bargain-hungry New Yorkers and out-of-towners willing to put up with crowds, noise, and service that has always been, well, lacking. Counter staffers don't take time to chat up a particular product. They'll talk price and features and expect consumers to make up their minds quickly.

That curt style was all it took to sell during the 1980s, when 47th Street boomed (chart). Since 1988, however, a recession and a host of competitors have cut into business. Sales have dropped 21%, to an estimated $225 million this year, according to the company. And at the start of the all-important holiday shopping season, it is tangled in a snarl of charges and countercharges between its owner and a former business partner.

VERBAL CONTRACT? The real financial status at 47th Street is conjecture at best. The company has been privately held since the day its founder, Irving Goldstein, a Hungarian refugee, set up shop in Manhattan's diamond district. He now co-owns the business with his wife, Leah. But the facts surrounding a series of suits filed in New York State civil court offer a glimpse into the business' inner workings in recent years.

As revealed in court documents and discussions with lawyers from both sides, Goldstein during the mid-1980s invested in New York real estate managed by one Joseph Fischer. When Goldstein, now age 45, was incapacitated in a car accident in 1987, Fischer says he stepped in and helped handle some of 47th Street's legal problems, such as negotiating a settlement with a trade creditor. For his services, Fischer maintains in one court document, Goldstein promised him a one-third share in the equity of the company. And the type of agreement upon which this alleged promise was based? A verbal one. Goldstein, now fully recovered, denies making such an agreement.



Although neither party will comment on the issue, court documents make it clear that Fischer and the company are wrangling over other matters as well, including Goldstein's charge that Fischer misappropriated $1.3 million from 47th Street. Fischer denies it, and his lawyers have countersued for defamation. On Nov. 22, a New York State Supreme Court judge said she would consider whether to dismiss all of 47th Street's suit. A ruling is pending.

Business, meanwhile, goes on, and 47th Street is coping with tough times. Money has been tighter since the company agreed to pay back about $10 million to Chicago-based Transamerica Commercial Finance Corp., which had canceled its line of credit with the retailer. And 47th Street also agreed last July to pay about $9 million in unpaid sales tax, interest, and penalties.

TOUGH ALL OVER. Joseph Greenfeld, 47th Street's 38-year-old chief operating officer, is candid about the cash crunch. "We are paying our bills within the context of the business environment," he says, meaning a little more slowly than in the booming 1980s. The company's sales almost tripled in that decade as people squeezed into its tiny flagship store. One store begat another, and by the end of the decade, 47th Street was operating in four Manhattan locations and a fifth on Long Island.

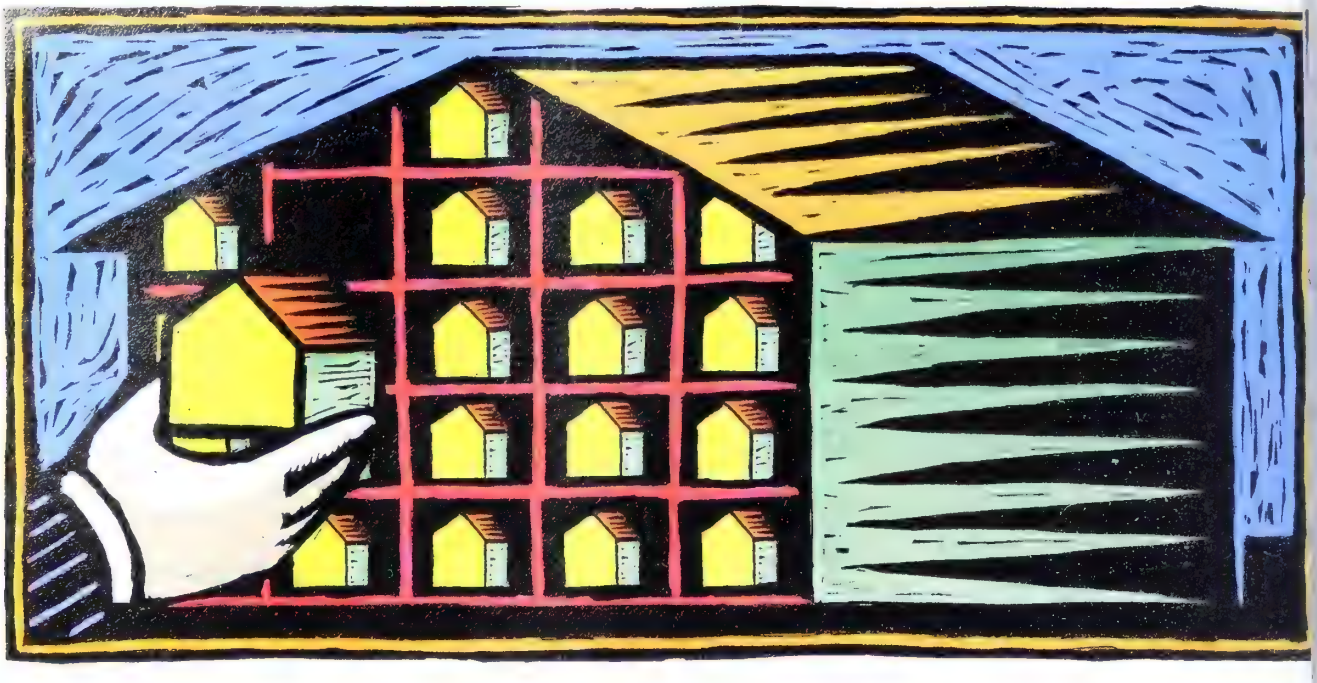
Those go-go days are over. Sales are down, plans for a New Jersey branch have been scrapped, and the company has been laying off staff. Greenfeld estimates that more than 20% of the company's 515 employees were let go since last year. 47th Street's problems largely reflect those of other consumer electronics retailers. Sales for consumer electronics and video equipment, which make up 50% of 47th Street's sales, are off by up to 20% since last year. Already, the recession has taken down one of the New York area's larger electronic retailers, Newmark & Lewis Inc., which filed for bankruptcy protection in September.

The disappearance of marginal players should eventually translate into higher prices and profit margins for the survivors. And 47th Street will probably pull through. Despite the rumors of financial problems, those big vendors that would comment say they're sticking by the company. "We will continue to support them," says Alan Czeizler, director of sales at Canon USA Inc., a longtime camera and photocopier supplier.

The company has its own ideas about how to weather the storm. Besides cutting staff and expenses, it recently expanded to the ground floor of its original location. It is even experimenting with a crazy little thing called service. The sales staff has been trained to politely discuss the merits of this or that new gadget with the customer. Maybe they can teach some of that newfound civility to Messrs. Goldstein and Fischer.

By Bruce Hager in New York

PHOTOGRAPH BY LARRY FORD; CHART BY ROB DONIE BW



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A STRUCTURE that, overnight,

would *turn* them from

LIQUIDATORS to MARKETERS

The Resolution Trust Corporation ecided to package its mortgages into securi- es for a sound reason: The move promised to ut them well ahead of where they'd be if they old pools of mortgage loans.

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A DEAL THAT TURNED SPECTATORS INTO INVESTORS.

Fortunately, the curious far outnum- ered the cautious. And their curiosity was qued even further by what *The Wall Street ournal* would later call the "adroit packaging" of the new securities by Lehman Brothers.

In short, the entire issue sold out on the very first day with the secondary market look- ing equally strong.

AN OPPORTUNITY TO ADD VALUE. NOW AND IN THE FUTURE.

Equally important, proceeds were 4% greater than the anticipated revenues from sell- ing the mortgages separately. Which provided the RTC with a rare opportunity to actually add value to an asset being sold, and with something that was even more valuable: a blue- print for the billions in RTC securities that would soon follow.

An unusual problem to be sure, but most problems find their way into the "unusual" category these days. Which may explain why Lehman Brothers is again a leader in mortgage-backed securities with almost $25 billion in issuance since January 1.

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LEHMAN BROTHERS

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MAGNA DOODLING: TYCO EXPECTS TO MOVE 4 MILLION OF THE $15 DRAWING TOYS THIS YEAR

'I WANT, I WANT, I REALLY WANT'

Kids everywhere love their toys—and this Christmas, adults are buying

Irena Choi Stern is a stay-at-home mom with three kids, 7, 4, and 21 months—so she should have a pretty good bead on how the toy industry is doing this Christmas. So what's the chatter around the sandbox? Forget the lousy economy, tight consumer credit, and the fact that bankers and brokers in her Manhattan neighborhood are getting laid off right and left. "I mingle a lot with other moms, and I don't know anyone who's cutting back," she says. "People are doing without a new coat, but they're just not going to buy fewer toys for their kids at Christmas."

Funny thing. In a gloomy holiday season, the $12.5 billion U. S. toy industry is having a great year. Since January, Kidder, Peabody & Co.'s index of toymakers' stocks has more than doubled, making toys one of the year's best investments. Big companies such as Mattel Inc. and Tyco Toys Inc. reported record third-quarter profits. They see new highs in the fourth quarter, too. Unlike last year, when nervous retailers started canceling orders in November, "I've been watching our orders go up every week," says Michael J. Lyden, senior vice-president for business development at Tyco. Adds Gary S. Baughman, head of Little Tikes Co., a Rubbermaid Inc. division: "We've been operating 24 hours a day, six and seven days a week."

How is it that toys are doing so well? It's partly that even financially strapped parents still want plenty of toys under the Christmas tree. But there's more to it than that. Exports, especially to Europe, are booming. Plus, notes Mattel Chief Executive John W. Amerman, there has been "a topping off of the video craze," leaving more dollars for traditional toys. Kidder analyst Gary Jacobson estimates wholesale sales of traditional toys this year will bounce up 7%, to $9.4 billion, while sales of Nintendo and other video games will run flat at $3.1 billion (chart). Many parents who bought Nintendo's $100 8-bit game are balking at $200 for the new 16-bit machine. "It's too high," gripes Denise Cordova, a Downer's Grove (Ill.) homemaker, "and the price of the game packs is too high, too."

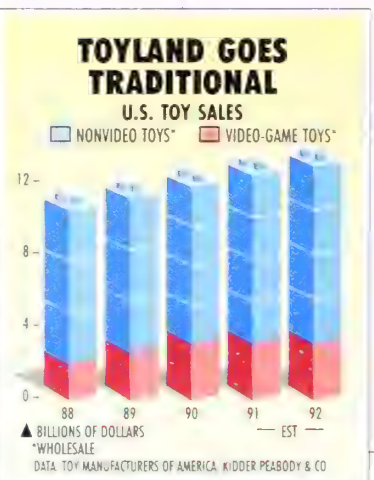
On top of all that, there's lots of pent-up demand. Sales were weak during the first half of the year as parents held off buying because of the war and the recession. But kids, notes Sharon Duffield Levy, a Denver mom, don't understand recession. She was driving a car pool the other day when talk turned to gifts. Suddenly, she says, the mood in the car was, "I want, I want, I really want."

What kids are likely to get are dolls, trains, and a host of other low-priced traditional toys. Sales of Mattel's Barbie dolls and accessories are expected to climb 8% this year, to $800 million. Hasbro Inc.'s Cabbage Patch Kids are making a comeback, with 1991 sales poised to top $100 million. Tyco expects to move 4 million of its $15 Magna Doodle drawing toy, up from 3.2 million last year. Even the venerable Etch A Sketch is doing so well that it is expected to help pull its maker, Ohio Art Co., into the black after two years of losses.

NIGHTMARE? Video-game makers aren't out of the race. Nintendo Entertainment Systems, which accounted for about 90% of video-game sales last year, expects to sell 4.5 million of its older, 8-bit games. But that's 37% fewer than last year, and most of the action is in higher-priced machines mainly bought by older kids and adults. And Nintendo has stiff competition. In September and October, their first two months on the U. S. market, 500,000 of the new Nintendo 16-bit machines were sold. Pretty good, except that Nintendo has to sell 1.7 million more by Christmas to meet its 1991 goal of 2.2 million. By contrast, reports Tom Kalinske, president of Sega of America Inc., demand for his competing $150 Sega Genesis 16-bit machine is so strong, "every phone call I get is a retailer beating me up" because Sega can't ship enough games in time for the holidays. Sega expects to sell 1.6 million units of its new game this year.

How long can the toy boom last? Little Tikes' Baughman cautions that there's still the possibility of "the toymaker's nightmare"—a sudden sag in holiday sales and lots of January discounting. Yet he and most analysts predict that eventual economic recovery and a host of new products expected at the industry's February toy fair will stop the Grinch from stealing 1992.

By Thane Peterson in New York, with Eric Schine in Los Angeles, Alice Cuneo in San Francisco, and bureau reports



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MONEY LAUNDERING

ZORRO, GORBY, AND HOWARD THE DUCK

How the feds busted an alleged money-laundering scam in Rhode Island

You call that the headquarters of a worldwide financial empire? The little cinder-block coin shop looks like just another storefront. But from this tiny bunker in Cranston, R. I., coin dealer Stephen A. Saccoccia has allegedly spent much of the past two years glued to a cellular phone, directing a money-laundering network that moved more than $500 million in drug money around the globe. Then again, if the substance of a federal indictment is true, the shabby office isn't the only unusual aspect of Saccoccia's financial dealings.

The alleged laundering operation ground to a halt on Nov. 25, when the Federal Bureau of Investigation swept down on nine Saccoccia companies in three cities. In late-night raids, they nabbed Saccoccia, age 35, and his wife, Donna, in Switzerland, while rounding up about 40 alleged members of his ring back home. Saccoccia and his wife are in Swiss custody and unavailable for comment. He has no attorney of record.

BUMBLING CROOKS. The FBI has been investigating Saccoccia's alleged ring for two years. Its probe offers a rare glimpse into the workings of a money-laundering operation. What comes to light is a cast of sometimes bumbling crooks, with such nicknames as Zorro, Gorby, and Howard the Duck. Once, as federal agents listened in, Saccoccia's men squabbled about who had left the office blinds open, giving passersby a clear view of a money-counting machine.

Stephen Saccoccia, say investigators, saw his opening after a large 1989 money-laundering bust in Los Angeles. Back then, Rhode Island law enforcement officials say, Saccoccia was a small-time coin dealer suspected of fencing for local thieves and working for reputed New England crime boss Raymond Patriarca. He had also served a short jail term for tax evasion in 1985. Then, according to documents filed in federal courts in California and Rhode Island, he set up a string of precious-metals trading outfits on both coasts. Such firms make a handy front, says assistant U. S. Attorney Jean Kawahara, because legitimate trading companies routinely have huge amounts of cash flowing through their accounts.

Saccoccia's alleged scheme highlights how Los Angeles has joined Miami, New York, and Providence as a money-laundering hub, says the FBI. Los Angeles is both the port of entry for heroin from Southeast Asia and cocaine from Central and South America and a major business center. And it's home to a host of big banks that routinely handle large amounts of legitimate cash. Those transactions serve as camouflage for the crooked dealings alleged by the FBI.

The laundry business is so brisk that even large crackdowns only temporarily stem the torrent of an estimated $1 billion that's laundered each year in Los Angeles, says Thomas R. Parker, an FBI agent in Los Angeles. "In a few weeks or days, a new network starts up," he says. "It's like plugging holes in a dike."

BAGS OF CASH. Yet even when Saccoccia was running money through Los Angeles, says the FBI, the Cranston gold shop was the nerve center of his operation. The cash it handled was funneled by drug dealers into Saccoccia-owned businesses in New York's jewelry district, where it was bagged and subsequently transferred by armored car, van, or Federal Express to Rhode Island. Saccoccia couriers then deposited it at local banks.

In April, 1991, after investigators closed his Rhode Island bank account, Saccoccia shifted his business to several West Coast banks. From those institutions funds were wired back to Rhode Island, Miami, New York, South America, or Switzerland.

Saccoccia took extravagant precautions. But the measures often backfired. Cash-laden vans often traveled in conspicuous caravans of three. Mandating code language to throw investigators off the trail, Saccoccia ordered his men to talk only on cellular phones in the mistaken belief that the gadgets were bug-proof. That proved a fatal error when investigators intercepted dozens of calls about "high grade" shipments, bundles of "20 karat," and deliveries of "200 ounces." It didn't take a genius to translate: shipments of large bills, bundles of $20 bills, and deliveries of $200,000 in cash. Says FBI agent Parker: "These people were not particularly shrewd."

By February, Saccoccia's crew was beginning to worry about discovery. "It's no good living like this," said one money-counter on an FBI tape. "I'm 59 years old. I gotta worry about going to the can." If the feds have their way, Saccoccia, too, will have to worry about trading his dingy office for a jail cell.

By Eric Schine in Los Angeles and Geoffrey Smith in Boston

COIN COLLECTOR: ACCUSED RINGLEADER SACCOCCIA RAN HIS BUSINESS OVER A CELLULAR PHONE FROM THIS STOREFRONT IN CRANSTON, R.I.

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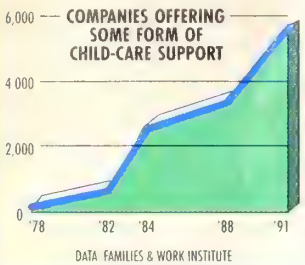
In Business This Week

HARRIS COLLINGWOOD

MINDING THE KIDS

Since 1978, the Families & Work Institute in New York has surveyed American businesses about child-care support. It's probably no surprise that more and more companies include child care on their benefits menu. But it is startling that, until quite recently, child care was for only adventurous companies



HAS THE SUN SET ON MAXWELL'S EMPIRE?

▶ Robert Maxwell's media empire was already tottering. Now comes the disclosure that the late tycoon may have siphoned more than $1 billion from his two publicly traded companies and their pension funds to prop up his private holdings. That may be the last straw: On Dec. 3, sons Kevin and Ian Maxwell resigned as chairmen of Maxwell Communication and Mirror Group, respectively, while British fraud officials investigate.

Bankers seemed likely to force key Maxwell companies into bankruptcy, which could lead to the sale of assets such as book publisher Macmillan and the New York *Daily News*. Maxwell's banks are already struggling to recover loans they made to his web of public and private holdings.

PAN AM MAKES ITS FINAL DESCENT

▶ Pan Am, one of America's most venerable symbols abroad, finally stopped flying on Dec. 4 after years of decline. A last-ditch effort to save the carrier by Delta and the airline's creditors came to naught on Dec. 3 when Delta walked away from the deal, citing a sharp decline in bookings and a steep hike in costs.

Delta will retain Pan Am's European system and its Northeast shuttle, assets it bought earlier for $416 million. But it still has trouble. Delta is unlikely to retrieve the $115 million it pumped into Pan Am to keep that carrier aloft as it tried to remake itself into a smaller company serving Latin America. And Pan Am's creditors plan to sue Delta for bargaining in bad faith. Meantime, Pan Am will try to peddle its lucrative Latin America routes. TWA and United are likely bidders.

ONE BAILOUT, HOLD THE MAYO, AND FRIES

Ancient banking wisdom: Restaurants come and go as often as subway trains during rush hour. Financial institutions, on the other hand, are built to last.

Schlotzsky's, a chain of sandwich shops with 125 locations in Texas, has set up three outlets in what were formerly branches of Texas savings and loans, and it's preparing to open at least six more. The ex-branches, says Schlotzsky's President John Wooley, are ideal locations, placed as they are at the edge of strip malls in high-traffic areas. Most are already set up to do some form of drive-through business, be it ham and swiss or debits and credits.

Wooley says that landlords are quite happy to rent to "a business that takes in cash. The other guys collect paperwork and give away cash. There's something wrong there." Taxpayers, choking down the cost of the S&L bailout, would probably agree.

A DEAL FOR UNISYS MAY BE IN THE WORKS

▶ Takeover speculation is roiling Unisys again. People close to London's Charterhouse Bank say the bank is trying to round up a group of prominent industrialists, academics, and a major industrial company to make an offer.

The sources say those involved in the talks include British Airways Chairman Lord King, former IBM Europe executive Edgar Neufeld, and Oxford University scholar Sir Claus Moser. Unisys Chairman James Unruh declined comment, and none of those named as investors would confirm their involvement in the talks.

THE JURY CONVICTS CHARLES KEATING

▶ A jury in California state court in Los Angeles on Dec. 4 found Phoenix financier Charles Keating guilty on 17 of 18 counts of securities fraud. He was charged with defrauding buyers of bonds issued by his company, American Continental, the owner of Lincoln Savings & Loan.

The jury deliberated for 10 days after two months of testimony. At the trial, elderly witnesses claimed that Lincoln employees tricked them into moving their money from insured CDs into risky junk bonds. Keating faces up to 10 years in prison and $250,000 in fines. He also must contend with many civil claims and an expected federal indictment.

NOW, FOR ASPIRIN'S NEXT MAGIC TRICK

▶ Regular use of aspirin may sharply cut the odds of developing colon cancer, according to a study published in the Dec. 5 *New England Journal of Medicine*. Based on data from 662,400 people tracked by the American Cancer Society from 1982 to 1988, researchers led by Dr. Michael Thun found that those who took aspirin 16 or more times a month for a year had half the risk of developing fatal colon cancer as nonusers.

Two earlier studies also found a reduced risk among frequent users of aspirin or other nonsteroidal anti-inflammatory drugs, but a third found that an aspirin a day actually boosted the odds of colon cancer somewhat.

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EDITED BY STEPHEN H. WILDSTROM

VOTERS ARE MAD AS HELL IN NEW HAMPSHIRE

As the Presidential race moves into high gear, analysts would normally be looking to Iowa's Feb. 10 caucuses as the first important test. But Democrats have all but conceded Iowa to home-state Senator Tom Harkin, and this is one state where President Bush isn't looking over his shoulder at a right-wing challenger.

That inflates the importance of New Hampshire's Feb. 18 primary as a bellwether. Granite State voters are notorious free spirits, and the one-third of the electorate registered as independents can vote in either the Democratic or Republican primaries. This year, an additional factor makes the primary even more volatile: A sickly economy has left voters angry about the Bush Administration's passivity and open to Democratic activism.

New Hampshire's economic landscape is far more barren now than in 1988, when the state basked in a New England boom that had driven the unemployment rate down to 2.5%. Today, the "miracle" is a fading memory. High-tech job losses, a real estate bust, and the collapse of local banks have sucked New Hampshire into a deeper recession than the rest of the country. Even the state's two electric utilities went bankrupt. "It's more like the Great Depression than a typical downturn in the business cycle," says Manchester lawyer Joseph F. Keefe, a Democratic activist. "People expect the government to do something about this."

GOVERNOR GREGG: BUSH'S MAN IN THE GRANITE STATE

A BIG FAVORITE. Four years ago, candidate Bush, at the urging of then-Governor John H. Sununu (page 30), won the hearts of New Hampshirites by promising "no new taxes." But Bush went back on the pledge in 1990, and conservatives are unforgiving. "His breach of faith on taxes is more visible in New Hampshire than anywhere else," says Republican analyst Kevin Phillips. "But the lack of an economic game plan adds to his vulnerability." Commentator Patrick J. Buchanan may give conservatives a way to vent their spleen if, as expected, he jumps into the race on Dec. 10. Buchanan will offer a new round of tax cuts, combined with a large dose of isolationism.

The President, of course, remains the favorite to win the primary. But Buchanan can still embarrass Bush, and if the President responds by trying to placate the GOP right, he could lose moderates to the Democrats. "Because New Hampshire is devastated, Buchanan is already pulling 20% to 24%," says political analyst William Schneider. "A President who's vulnerable in his own party's primary is in trouble."

Even Bush's backers say his Hooveresque policies are worsening his problems. Governor Judd Gregg, just chosen to head the President's New Hampshire reelection team, acknowledges that Buchanan "shouldn't be underestimated. People are upset over the economy and want to see some action." Adds Joseph A. Baute, owner of a Keene printing-equipment company: "I don't think the Administration cares or understands how difficult things are up here."

For the Democrats, New Hampshire is an opportunity: The winner will grab the lead nationally. All the Democrats are shaping their appeal to the middle class. Early front-runners are ex-Senator Paul E. Tsongas, who lives just over the state line in Lowell, Mass., and Nebraska Senator Bob Kerrey, whose heroism in Vietnam appeals to voters. Although Arkansas Governor Bill Clinton's New Hampshire campaign is just getting started, he has impressed state pols with a well-focused, moderate message. Fence-sitting New York Governor Mario M. Cuomo, who polls very well, faces a Dec. 20 filing deadline for the New Hampshire primary.

Since all the Democrats are coming with an armful of economic blueprints, they'll have an easy time playing to the state's distress. Bush faces a far more difficult task, counseling patience and self-reliance to a state that seems ready for a dose of old-fashioned government activism.

By Paula Dwyer, with Douglas Harbrecht

CAPITAL WRAPUP

DEMOCRATS

Arkansas Governor Bill Clinton may yet do well in New Hampshire, but he's pinning his hopes for the Democratic Presidential nomination on the delegate-rich early Southern primaries. To complement his strategy for the region, he's putting together a Southern team. Clinton has signed up James Carville, the most sought-after Democratic consultant of Campaign '92. The hard-hitting Louisianan gets much of the credit for engineering Democrat Harris Wofford's upset Pennsylvania Senate victory. Clinton is also talking to Jody Powell, press secretary to President Carter, about coming aboard as media guru. Although Clinton remains relatively unknown, some political pros think his well-organized campaign could quickly move him to the head of the pack.

ENERGY

Despite denials, Energy Secretary James D. Watkins appears to be readying his exit from the Administration. Sources say Watkins has told top White House officials that he would like to depart early next year for a job in private industry, and a low-key search for a successor is under way. Adding to the speculation: Top aides to the Energy chief have also been making inquiries about private-sector jobs.

THE SENATE

Colorado could provide a ray of hope to otherwise bleak Republican Senate prospects. Although State Senator Terry Considine is hobbled by a riding accident, he holds a commanding lead over GOP rivals and is threatening freshman Democratic Senator Timothy E. Wirth. A *Denver Post* poll shows Wirth leading Considine by only a 49-32 margin, a poor showing for an incumbent. Republicans also see an opening in Georgia, where first-term Democrat Wyche Fowler Jr. is paying for his early opposition to the Persian Gulf War. Former Peace Corps Director Paul Coverdell is the leading challenger.

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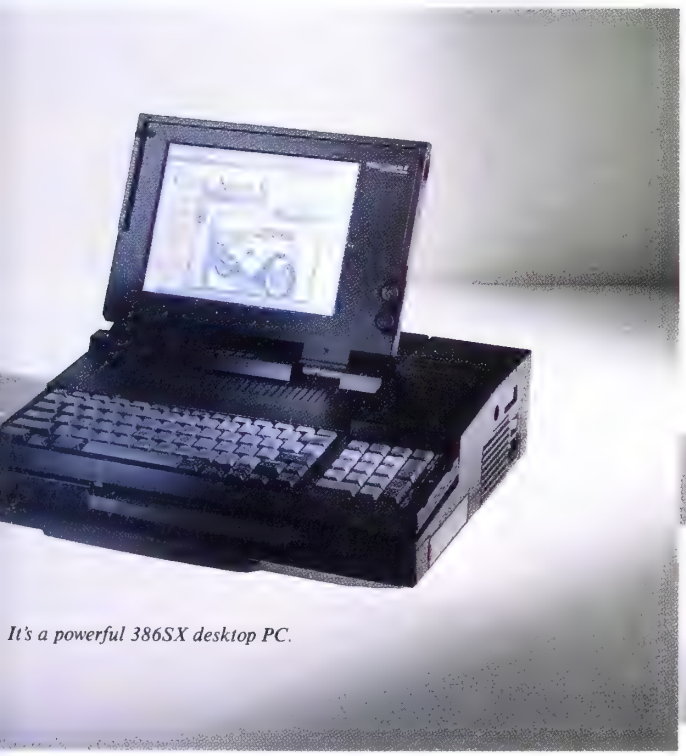

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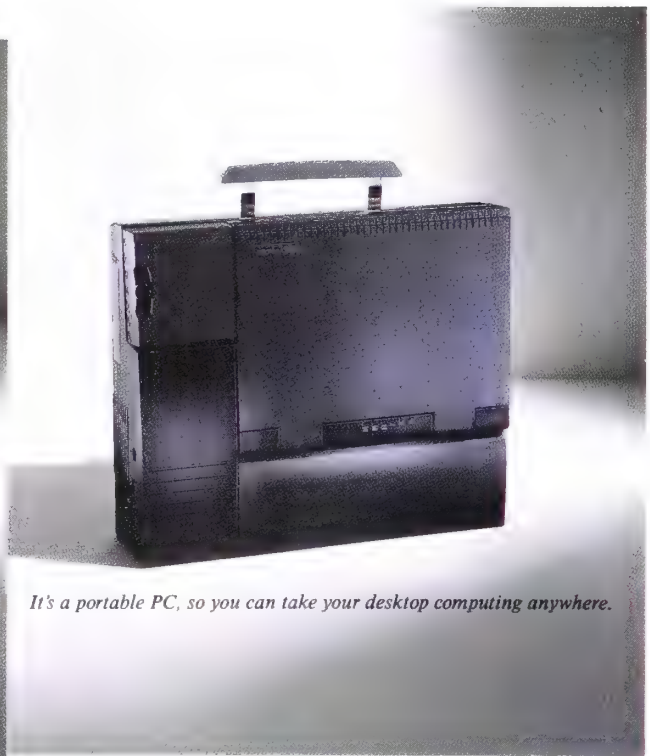

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YELTSIN ROLLS THE DICE

But will a free market take hold in time?

Even by Russian standards, the sense of foreboding is extreme. In apartment parking lots, retirees living on $5 a month pick through garbage bins for scraps of food. Fear of crime has increased so much in Moscow and St. Petersburg that sales of a Russian version of Mace, the anti-assailant aerosol, are booming. When the value of the ruble fell 50% on Dec. 3, Muscovites thronged exchange windows and hustled black marketeers in a mad scramble for dollars, increasingly the currency of choice. The next day, Soviet financial officials announced they were suspending principal payments on their foreign debt.

Against such a grim backdrop, Russian President Boris N. Yeltsin is finally preparing to take the radical steps toward a market economy that Mikhail Gorbachev dithered over for six years. Russia is adamant about going it alone, especially after Ukraine, the next-most-powerful former Soviet republic, voted to become independent on Dec. 1. That has dashed fast-fading Gorbachev's remaining hopes of holding together the Soviet Union. Faced also with an acute budget crisis, Gorbachev may resign soon, an anticlimactic end to his astonishing career.

As leader of Russia, Yeltsin is pushing ahead with 42 emergency decrees that will reshape the economy in ways the West has long urged. In coming weeks, most wholesale and retail prices will be freed for the first time in nearly seven decades. Yeltsin vows that mushrooming government spending will be slashed and printing presses churning out nearly worthless currency will be shut down. The ruble will be allowed to float against the dollar, finally allowing its partial convertibility.

It is, essentially, the same shock therapy that Poland undertook in January, 1990. But this time it will be tried on a vaster scale, and even the Western economists who helped draw up the blueprints are biting their nails. Notes Anders Aslund, a prominent Swedish economist advising Yeltsin: "This is a complete powder keg."

'READY TO STRIKE.' For Yeltsin, it's an extraordinary gamble. His tough program will dramatically boost inflation just as major food shortages are expected in large urban centers such as Moscow in the winter months ahead. Prices of various goods will leap anywhere from 3 to 15 times. Fears of riots are running high, since more than half of Russia's 150 million citizens already live on poverty-level incomes of 350 rubles a month or less and are used to cheap prices buttressed by vast government subsidies. "Almost the entire country is ready to strike," says Nikolai Akritov, an official of the Russian Federation of Independent Trade Unions. If disorder becomes rampant, young army officers or hard-line nationalists might stage a coup. While a dictatorship wouldn't solve Russia's economic problems either, exhausted citizens might support colonels promising them food.

Can Yeltsin's plan work? His backers say that goods will soon start filling the stores. Prices may soar, and inflation may hit triple digits. But within a few months, enough of such staples as cabbage and *kolbasa*, a Russian sausage, would be hitting the market to spur competition and price equilibrium. Even a modest flow of food and other goods might be enough to persuade Russians to stick with the tough reform program.

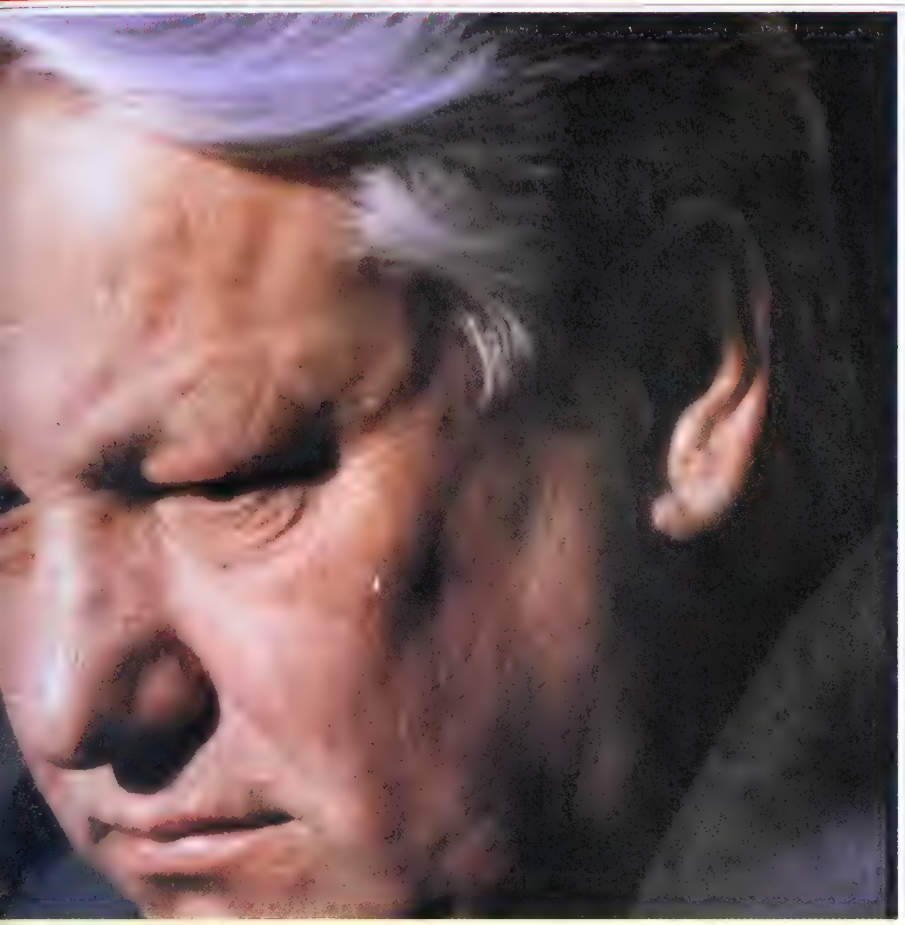
MAKING CHANGE: THE FLOATING RUBLE COULD HELP SPUR A SURGE IN FOREIGN INVESTMENT

IF THE REFORMS WORK...

IF THEY FLOP...

Yeltsin's team of young economists in their late 30s and early 40s are betting that, despite some fundamental differences, Russia will take to shock therapy the same way Poland did last year. During the first month of the Polish experience, prices rose as much as 400%. But within six months, inflation was down to levels of 4% per year. The Polish zloty actually gained value after a bumpy plummet that lasted several months.

Already, Yeltsin's decrees are sending tremors through the Russian economy. Down on the farm, hoarding has been rampant in anticipation of Yeltsin's freeing prices. But now that the measure is imminent, a flood of farm products, from potatoes to grain and carrots,



eltsin issues decree freeing prices
armers release hoarded produce
oods flood state stores
arket ruble-exchange rate boosts
nports

- Privatization speeds up, competition grows
- Prices level off, living standards rise, foreign investment surges
- Similar measures follow in other republics

eltsin issues decree freeing prices
haos erupts since the system is prepared to handle pricing
ores remain empty

- Farmers continue hoarding, black-market prices explode
- Riots over shortages break out
- Disillusioned army officers, allied with hard-line conservatives, seize control

could begin moving toward stores and markets. In the fertile Saratov region of central Russia, for example, collective and private farmers have been saving up millions of tons of grain and vegetables such as onions and garlic, says Anatoli Musikhin, president of a regional farmers' association. An estimated 130 million tons of grain have been stowed away on farms throughout the country—almost three-fourths of the harvest. But he predicts the goods will move soon. "Farmers will sell," Musikhin predicts. "The only reason they keep the products is because prices are too low and it's unprofitable."

In the big cities, state shopkeepers are eager to see prices freed up. At a sparsely stocked neighborhood grocery near Moscow State University, for example, store director Nadezhda I. Frolova believes that free prices will allow her to boost the store's supplies of beef, chicken, and eggs by 10 times. Up until now, the store has received supplies only through a state-monopoly distributor that supplies 60 stores in Moscow. But now, says Frolova, several new distributors have been in contact about supplying her shop. After Yeltsin frees prices, she says, "I'll go directly to the supplier. We already have many offers from middlemen. There are suppliers promising us an avalanche of food."

Soviet managers also are uneasy about the transition. Even efficient Russian factories will be badly squeezed by sprialing prices. In Russia's frozen Western Siberian petroleum fields, Vladimir Yudin, director of a thriving oil refinery, the Tobolsk Oil Processing Kombinat, figures that if he raises his prices for gas products by 10 times, he should be able to keep his operation solvent. "It will be difficult to brake inflation," he worries.

Perhaps the Yeltsin measure with the biggest long-term impact will be his plan to abolish fixed exchange rates, which have resulted in money values far out of whack with reality. On Jan. 1, the currency's market rate will be set by auctions held by banks. The strategy: The ruble will find its true market value and stabilize—even if it plunges to an astounding 300 rubles to the dollar, more than three times the current black-market rate.

In theory, that's a boon for foreign investors. Under the current system, they have to jump through bureaucratic hoops and invent elaborate schemes to repatriate their ruble profits in hard currency. After Jan. 1, that will change. They'll just go to a Russian bank, exchange the rubles, and send the dollars home. For that matter, individual Russians will be allowed to have dollar accounts in commercial banks for the first time. "It's the first serious program for radical reform," says Arthur L. George, a lawyer with the Moscow office of Chicago-based Baker & McKenzie, whose client list includes Walt Disney Co. and Shell Oil Co.

RAW DEALS. What's more, Yeltsin is lifting most licensing requirements on foreign trade and canceling current taxes and tariffs on imports. That, ultimately, could draw more Western consumer goods into the Russian market. It also may prompt a quick increase in Russian exports of raw materials such as metals and timber. These items should become bargains on the world market because the Soviet bureaucracy has inflated their export prices.

Meanwhile, Yeltsin will ban the sale of goods and services for dollars on Russian territory, starting as early as Jan. 1. That will toss cold water on many of the service joint ventures that flocked in during the *perestroika* years to take advantage of dollar-paying tourists and the expatriate community. Managers at Stockmann's, a Finnish department store with two outlets selling goods for hard currency in Moscow, are worried. "All our imports must be paid in hard currency. We can't operate if we can't convert," says Ilkka T. Arvola, manager of one of the Stockmann's.

Big changes are also afoot at the posh Savoy Hotel in downtown Moscow that

(L. TO R.) PHOTOGRAPHS BY ALEXEI ROGOV. J. WITT—IPA

features a wood-paneled bar and a casino. Converted from a dowdy Intourist hotel two years ago, the Savoy charges its guests premium rates in dollars. But now, INFA-HOTEL, the Finnish-Soviet company that runs the Savoy, says it will be forced to post dollar-denominated prices and have customers come up with the rubles to match. The ruble exchange rate for a room may vary widely day to day, giving accountants migraines.

For foreign business and Yeltsin alike, the shortage of hard currency is a huge problem. Yeltsin needs dollars to keep servicing the Soviet Union's $84 billion debt load. To get them, he plans to tax Russian businesses half of their dollar earnings. Foreign businesses worry that there won't be enough dollars to service the hard-currency auctions where they can exchange their rubles. "You can't talk convertibility unless you have something to convert to," says James H. Giffen, president of Mercator Corp., a New York trading firm that is trying to help five blue-chip American companies set up joint ventures in the former Soviet Union.

Yeltsin also could get sandbagged by newly independent republics, such as Ukraine, that are likely to introduce their own currencies. If that happens, a tidal wave of unwanted rubles will wash through Russia, further depressing the currency's value. Such a scenario was foreshadowed on Dec. 3, when the state foreign-trade bank increased the exchange rate of rubles for tourists from 47 to 90, touching off a frenzy of dollar buying. In the shadow of Yeltsin's "White House" headquarters, one youthful money changer offered to trade dollars at a rate two rubles better than the new tourist one. "There'll always be a black market," he said. "A lot of rubles will be coming from Ukraine or Byelorussia."

Such a steady flow could rip apart Yeltsin's blueprint. If the ruble free-fall can't be checked, farmers and manufacturers will continue to hold on to their goods and wait for higher prices, once again emptying stores and frustrating the citizenry.

To prevent that from happening, Yeltsin will have to hang tough. He must cut the 150 billion-ruble Russian budget deficit and keep a tight rein on the money supply. One scheme would slash the state budget by up to 25% and boost revenues via a punitive 28% value-added tax. The Russian government already has taken over control of central finances, including the money-printing presses, from Gorbachev. But Yeltsin still will be under enormous pressure to cover state wages and maintain subsidies. And if the ruble overhang becomes uncontrollable, Yeltsin could well be forced to create a new currency. With Russian citizens walking around with their pockets stuffed with rubles, rumors abound that a new 1,000 ruble note is about to be issued.

Even flawlessly executed economic policy, however, won't do much to solve the more basic problems. Many Russians still have no understanding of a market economy. Take farming. Poland had a relatively easy time making its transition to a market economy because its farms were almost entirely privately owned before economic reforms. Russia boasts about 30,000 private homesteads, while more than two-thirds of all agricultural output comes from state and collective farms. And most collective farm presidents in Russia staunchly oppose any changes because reforms such as allowing private ownership of land would erode their political power bases.

INEXPERIENCED HANDS. State agencies still control inefficient distribution and transportation outlets. Until Russia pushes through a broad privatization program, chronic problems of food distribution will likely remain. Some state store managers have little idea of how to set competitive prices. Says Roland Götz-Cönenberg of the Federal Institute of Soviet & East European Studies in Cologne: "The key danger to these decrees is that Russia doesn't have enough professional managers, bankers, accountants, and administrators who can put them into practice."

And Yeltsin may again have to square off against the Red Army. Morale has plummeted since last August's attempted coup, which failed when army officers refused to obey plotters' orders. Now, young officers themselves are threatening to seize control to restore order. "If the situation does not improve soon, officers will unite and take power into their own hands," warns Lieutenant Colonel Stanislav Terekhov. He is a member of the organizing committee of the newly formed Union of Communists, which claims 70,000 supporters and promises to return the country to Soviet power.

So Yeltsin's gamble has little time, and the odds are against him. Given Russia's history—and Yeltsin's political career—almost anything can happen. "The expectations should be kept very low," counsels Swedish economist Aslund. "Anything that is less than complete chaos must be considered a success." But even that low hurdle may be too hard to overcome. Yeltsin may discover his plunge into a free market is coming too late.

By Rose Brady and Deborah Stead in Moscow, with Igor Reichlin in Bonn, Patricia Kranz in Washington, and Peter Galuszka in New York

BARREN PLAIN: NEARLY THREE-FOURTHS OF THE 1991 GRAIN CROP HAS BEEN SQUIRRELED AWAY

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POINT MAN: THANKS TO HIS INTERNATIONAL SAVVY, UMBERTO AGNELLI MAY SHED THE MANTLE OF PERPETUAL CROWN PRINCE

THE AGNELLIS BUY THEIR WAY INTO EUROPE '92

Hedging their bets on Fiat's home market, the clan diversifies

"I really won't be satisfied until I have a Nestlé." That's how the patrician Italian industrialist Giovanni Agnelli used to joke with his close friends about his family's acquisitions in food and beverages.

It's hardly a joke anymore. While the Agnelli name has been almost synonymous with car giant Fiat, the first family of Italian capitalism is aggressively turning its attention to investments far removed from greasy auto assembly lines. In late November, an Agnelli investment arm bid $330 million for a controlling stake in France's Exor group, which in turn controls the $2.4 billion Perrier bottled water empire. That's only the latest buy in an Agnelli shopping spree that has ranged from yogurt to insurance to hotel management.

Going into the more unified Europe of 1992, the Agnellis see the need to hedge their bets on cars—and on Italy itself. The family's flagship Fiat—the Agnellis directly and indirectly control 41% of the group's capital—faces unprecedented competition in its core car and truck lines. While Fiat's costs are among the lowest in Europe, the Turin-based group's lineup of new products is skimpy, just when hungry competitors such as General Motors Corp. and Volkswagen are rolling out hot models.

Not to mention the Japanese. Under an agreement cut last July, the European Community will gradually allow more Japanese cars into protected markets such as Italy's. Fiat's once-commanding market share in Italy has dropped to under 48% from over 60% only three years ago. In the same period, the company has gone from record profits of $2.6 billion to an estimated $500 million. Next year, says Agnelli, will be "very difficult." There's renewed speculation of a merger with France's Peugeot as a possible way out of Fiat's problems.

GALLIC GRAB. In the effort to redefine themselves, the Agnellis are moving fast to diversify geographically, too. For decades, the Agnellis have thrived mainly within Italy's borders. Now, the quintessential Italian business empire is reducing its exposure in Italy and gearing up for the rest of Europe. This move could foreshadow tough times for Italy as it limps along with crippling government debt, widespread political malaise, and anemic capital markets. "We have to invest abroad," says Gabriele Galateri, a former banker who guided IFIL, one of the family's companies, as it invested $1.3 billion over the past three years. "The potential in other European countries is unfortunately higher than it is in Italy."

In expanding their reach, the Agnellis are not relying on Fiat, whose sales of $49 billion are still heavily dependent on the domestic Italian market. Instead, the family is using a collection of investment vehicles bearing such names as IFI, IFINT, and IFIL. While these companies have some operations in Italy, they are the ones being used to gobble up properties mostly in Europe but also in Asia and the U. S.

The goal, advisers suggest, is to become a food and beverage titan in Europe on a par with Switzerland's giant Nestlé. It's still open to question whether the Agnellis can manage such a disparate business on a continent-wide scale, or whether the notoriously low-margin food and beverage business will yield rich profits.

But for now, the Agnellis are looking like some of Europe's savviest investors. They've already proven their knack for making shrewd investments inside Italy. In fact, although the value of Fiat's noncore holdings are carried on company books at a measly $2 billion, they now have a market value of more than $9 billion, according to Francesco Paolo Mattioli, Fiat's top finance man.

Aside from buying properties outright, the Italians are breaking ground in strategic alliances in France and Germany. The Agnellis are teaming up with Germany's Metallgesellshaft on jointly owned Paris-

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based trading company Safic Alcan, which last year notched up $600 million in business, mostly rubber trading in the Far East. IFINT's control of Exor, with its 35% holding in Perrier as well as a portfolio of prime Paris real estate, gives the Agnellis added clout in the French corporate world. A 20% stake in Sardinia-based Meridiana, southern Europe's largest private airline, is IFINT's sole investment in Italy.

The Exor investment is an example of the Agnellis' growing interest both in food and in France. Through IFIL the Agnellis are now the key shareholder in France's No. 1 food and beverage giant, BSN, which last year chalked up $9.6 billion in sales. And BSN and the Agnellis have spent over $1 billion buying Italian food companies ranging from Sangemini, the country's largest mineral water concern, to Galbani, the leading salami and cheese group. Such joint investments now give the Turin clan control over the country's largest assemblage of food companies, with $3 billion in annual sales.

In many cases, the Agnellis are trading their commanding position in the Italian market for a piece of the action outside the country. French publisher Hachette, for instance, swapped shareholdings with Milan's Rizzoli Corriere della Sera publishing group, which is indirectly controlled by Agnelli companies. And Fiat traded its Italian telecom unit, Telettra, for 6% of French electronics giant Alcatel Alsthom and two of its subsidiaries. "The Agnellis," says Lazard Freres & Co. Chairman Michel David-Weill, "are first and foremost remarkably good partners for foreigners who want to do things in Italy."

IN THE SPOTLIGHT. The Agnellis' changing strategic focus may also be accompanied by a change at the top. According to a clause in the statutes of Giovanni Agnelli & Co., which controls the major Agnelli holdings, managing partners must retire at age 75. In Giovanni's case, that means 1996. And, company insiders say, the silver-haired magnate may abdicate even before then.

The diversification drive is putting the spotlight on the mild-mannered Umberto Agnelli. Over the decades, he has played No. 2 to his older brother, Giovanni. Right now, 57-year-old Umberto is the architect of much of the family's overseas, nonauto investments. In the drawing rooms of Agnelli courtiers in Turin and Milan, the talk these days is of his increasing responsibilities and powers. Says one Fiat employee close to both brothers: "Umberto will be king before too long."

Umberto's increasing power is shifting the emphasis at the group. He has more experience in Asia and Eastern Europe than his brother, who passes almost as much time in New York—where he has a Matisse-filled Park Avenue penthouse—as he does in Turin. The elder Agnelli recently told an interviewer: "All [Umberto's] links with Japan, his knowledge of Japan, and his responsibility for relations with Eastern Europe give him a different training to my own. My life has been Europe with America. I'm more Atlantic."

SCOUTING ASIA. Signaling the shift, the company is making its first moves in Asia, though from a much more modest starting point than in Europe. A few days after Umberto returned from Tokyo in November, Richecourt, a new Hong Kong-based venture capital group jointly owned by the Agnellis' IFIL, the Rockefellers, and France's Worms & Co., announced its first deal: a chain of clubs for business executives. And in the next few weeks, IFINT, the holding company that oversees the major Agnelli investment in the U. S., will be opening an observation post in Singapore. Says Gianluigi Gabetti, managing director of IFINT: "We'll pay a lot of attention to the Far East."

Even within the Fiat group, diversification is providing a lift. Such activities as robots, financial services, and chemicals will account for over 27% of sales this year. Says Dagmar Bottenbruch, auto specialist at Financiere Credit Suisse-First Boston in Milan: "If it weren't for diversified sales, Fiat would be losing money this year."

Even as the Agnellis acquire properties outside of Italy, however, they are selling off pieces of Fiat to help meet the enormous cash needs in the auto and truck divisions. Company insiders say that spinning off all or part of the retailing and insurance units is likely over the next year or so. Says Umberto: "In the next five years, our core business will need money. And yes, we will slim down." Flagship Fiat may be in for rough times, but the broadening of the Agnelli empire will help cushion the shock waves of Europe '92.

By John Rossant in Turin

THE NEW AGNELLI EMPIRE

Faced with increasingly brutal competition in autos, Italy's premier industrial family is diversifying into food, hotels, airlines, and other more lucrative fields throughout Europe

PERRIER

After snapping up leading Italian mineral water brands last year, an Agnelli investment arm in late November bid for a dominant stake in France's Perrier, the world's leading bottled water group

DANONE

With 5.75% of BSN, France's largest food group, the Agnellis now have a partner with clout for joint acquisitions in food. Danone yogurt is one BSN brand

MERIDIANA

The Agnellis' 20% stake in Meridiana, southern Europe's largest private-sector airline, is one of the family's Italy-based diversifications

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SUDDENLY, FREE TRADE WITH MEXICO IS IN TROUBLE

When President Bush hosts his Mexican counterpart Carlos Salinas de Gortari at Camp David on Dec. 14, the mood won't be as cheery as in the past. Suddenly, the prospects of the two leaders' creating a U.S.-Mexico-Canada free-trade zone rivaling the European Community have turned sour. It now seems unlikely that they will meet their target of getting a pact through the U.S. Congress in 1992.

The deal looked like a shoo-in when Congress gave the Bush Administration fast-track negotiating authority last May. But the political climate has shifted radically since then. The U.S. recession has raised fears that any trade pact will accelerate the drain of manufacturing jobs to Mexico. With an election year approaching, bashing the pact has become good politics. Pennsylvania's Harris Wofford scored points doing it on the way to his surprise U.S. Senate victory in November. Now, Senator Tom Harkin (D-Iowa) has made opposition to free trade a centerpiece of his Presidential campaign. On the right, Republican commentator Patrick Buchanan may challenge Bush in the New Hampshire primary with an "America First" campaign critical of the deal.

NORTH CAROLINIANS PROTEST THE TRANSFER OF JOBS TO MEXICO

'NOTHING GOOD.' While Carla A. Hills and other trade officials are keeping up a brave front, many political strategists now consider it unlikely that Bush could push an agreement through Congress before the elections. "No one has given up on trying to get an agreement next year, but clearly, this is going to be more difficult than we expected," says one top trade official. Congressional committees are expected to scrutinize any agreement line by line, pushing a vote well past November.

Such a delay would jeopardize free trade in both Canada and Mexico. Canada's own deep, drawn-out recession has already helped sink Prime Minister Brian Mulroney's approval ratings below 20%. Moreover, Canadians blame the U.S.-Canada free-trade pact of 1988, which Mulroney enthusiastically supported, for Canada's sky-high 10.3% unemployment. So Canadian opposition to a pact with Mexico is already intense. "There will be nothing good for Canada in this deal," says Maude Barlow, a leading opponent of free trade.

If the negotiations drag on too long, they may become a huge issue in the general elections that must be called by late 1993. Warns Gordon Ritchie, a former top Canadian trade negotiator: "If we don't have a deal by March, it means postponing until 1993, and then all bets are off."

LOSING CLOUT. Although the trade talks are vastly more popular in Mexico than in Canada, snags could also lead to troubles there. Free trade's chief backer, Salinas, is now halfway through the one six-year term allowed Mexican Presidents, and he'll gradually lose clout from here on. If the pact is still on the table as the struggle over presidential succession heats up, it could become a prime target for nationalist opponents. That's why Salinas is hustling to Camp David to try to rejuvenate the talks.

A setback on free trade could have disastrous consequences for Salinas' reform program. Expectations of a quick agreement have drawn $12.5 billion into the Mexican financial markets this year alone, driving the stock market up 120% and giving Mexico a record $16 billion in reserves. But analysts warn that a souring of the free-trade talks might spook investors—sending the economy into a tailspin. "Negative headlines on free trade would send people to the door," says William G. McBride, an analyst at Lipper Analytical Services.

Bush also has a lot to lose. He's already under sharp attack for lacking a strong domestic policy. Disarray on free trade would weaken his remaining strong suit—foreign affairs.

By Paul Magnusson in Washington, William C. Symonds in Toronto, and Stephen Baker in Mexico City

GLOBAL WRAPUP

HUNGARY

Western high-tech exports to Hungary, Czechoslovakia, and Poland are likely to be decontrolled within a year, U.S. officials say. The move would allow free export of telecommunications and other advanced equipment and spur Western investment in high-tech manufacturing facilities there. The 17-member Coordinating Committee on Multilateral Export Controls, or Cocom, is expected to remove Hungary from its list of proscribed countries early next year. Hungary will get the nod first because of its political stability and its progress in establishing an export-control regime. Delisting of Poland, which still has 35,000 Soviet troops on its soil, and Czechoslovakia, which is a major weapons exporter, could take several more months.

ISRAEL

In what could prove to be a milestone in economic reform, Israel looks set to float a 25% stake in Israel Chemicals, the second-largest state-owned company, on the Tel Aviv stock exchange in January. This will be a major test of the government's seriousness about privatization as well as the Israeli stock market's ability to absorb large issues. ICL had $1.25 billion in sales last year and is valued at $1 billion to $1.4 billion. The government plans to sell 15% more to a foreign investor and an additional 32% to the public, but it will retain 28%.

GERMANY

The Social Democrats are using their control of the Bundesrat (upper house) to stymie Chancellor Helmut Kohl's economic initiatives. On Nov. 30, the SDP, taking a populist stance, torpedoed Kohl's pro-business tax reforms as well as a plan to streamline the Bundesbank. The political gridlock is shaking business confidence and diverting Kohl's attention from European issues. Bonn is starting to look like Washington on the Rhine.

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STRATEGIES

THE WORD AT GRACE: IF IT'S NOT SELLING, SELL IT

President Bolduc has $1.5 billion worth of properties on the block

As first encounters go, this one was a disaster. Back in 1982, J. Peter Grace, the mercurial chief of W. R. Grace & Co., was heading a commission created by President Reagan to study cost control in the federal government. Into a meeting walked J. P. Bolduc, then a vice-president with the consulting firm Booz Allen & Hamilton Inc. Bolduc, under the impression he was going to see Grace alone, unexpectedly found himself having to expound in front of 35 people on how the commission should be run. Grace challenged Bolduc's assertions and made some snide comments about consultants. Bolduc stormed off, vowing never to work for the commission—let alone for Grace.

Bolduc apparently doesn't carry a grudge. After an impressed Grace called him repeatedly, Bolduc relented. He not only joined the commission but also threw in his lot as a senior vice-president with Grace's sprawling $6.8 billion industrial conglomerate a year later.

Today, Bolduc, 52, is the company's president and heir apparent, although the 78-year-old Grace has no plans to retire. "I'm running the company," he huffs. Grace continues to plot strategy, while Bolduc oversees operations. And with the boss's apparent blessing, Bolduc has begun to dismantle much of the empire Grace built in his 46-year tenure at the top. "Clearly, Peter Grace has told him what he wants to do," says Peter S. Lynch, former manager of Fidelity Investments Inc.'s Magellan fund and a Grace director since 1989. "And J. P. Bolduc has ideas of his own."

Bolduc spearheaded the radical restructuring Grace unveiled in early November. The company plans to shed $1.5 billion worth of assets, or 24% of its total, while refashioning itself around its core specialty chemical and health care operations (charts). And in contrast to Grace, Bolduc wants more centralized control over his domain, while demanding better bottom-line performance. An earnings laggard in recent years, the company has set some ambitious goals—10% annual earnings growth and a 20% return on equity by 1995.

SCANTY EXPERIENCE. Getting there is no cinch. Despite shedding assets such as restaurants and retail stores in recent years, Grace is still a grab-bag of 28 businesses with more than 100 product lines ranging from cocoa to plastic wrap. Its return on equity averaged just 8.6%, compared with 13.6% for the average company in the Standard & Poor's 500-stock index. And Grace's balance sheet is no prize. Long-term debt had soared to $1.9 billion, or 54% of total capital, at the end of 1990 as the company borrowed to finance capital spending and outlays such as dividend payments. Cash flow has been negative since 1986.

Then, too, there's the question of Bolduc's rather scanty hands-on operating experience. Aside from a brief stint as chief financial officer, Bolduc has spent most of his nine-year career at Grace overseeing the company's cocoa and other specialty businesses. Some former executives wonder whether he has the kind

W. R. GRACE'S LATEST MAKEOVER
THE BUSINESS MIX NOW... ...AND AFTER RESTRUCTURING

PHOTOGRAPH BY GERRY DAVIS CHART BY LAUREL LAUNIS BW

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of managerial knowhow to run a far-flung outfit. "Bolduc has never run an operating unit for any period of time," says one former insider. Retorts Bolduc: "People told me they thought I'd be gone in 90 days. I'm still here."

Bolduc is determined to prove his critics wrong. His first task: carry out the company's planned asset sales. Grace has already sold six businesses, including its feed and automotive-chemicals companies, for more than $230 million. And it expects to pick up another $370 million from divestitures by yearend. If that happens, Bolduc figures the cash, plus the savings from trimming capital expenditures this year by 22%, to $400 million, will allow the company to reduce debt to a more comfortable 45% of total capital by the start of next year. Further savings should come from the shift this summer of Grace's headquarters from Manhattan to Boca Raton, Fla. And more relief will come in 1992, when Bolduc expects to unload an additional $900 million worth of businesses.

For future growth, Bolduc is scouting out new markets and acquisitions for the five specialty chemicals businesses Grace intends to keep. To get more mileage from standbys such as Cryovac plastic packaging, Bolduc aims to expand it from food service to health care and other products. Grace is also bolstering its No. 3 position in industrial water treatment, spending $42 million last year to buy three companies in Europe and one in Australia. Bolduc figures this $241 million business will grow 15% annually.

STILL SHOPPING. He also has aggressive plans for Grace's second core business, health care. Through its National Medical Care Inc. subsidiary, Grace is the largest nonhospital supplier of kidney-dialysis service in the U.S. Grace's health care businesses produced sales of $875 million last year, or 13% of the total, and analysts say it should grow at up to a 20% annual clip for the next several years. The company also plans to increase its market share by buying independent dialysis centers.

Grace says he backs the changes Bolduc is making. And so do investors: Since January, Grace stock has risen 60%, to about 39. "Bolduc has done a marvelous job of orchestrating the company," says Mark R. Gulley, a Morgan Stanley & Co. analyst. But can this maestro help the company's earnings hit the high notes? This year, Grace's earnings are expected to grow by only 6%, to $217.7 million, on $6.9 billion in sales, figures Merrill Lynch & Co. If that doesn't change soon, Bolduc may find himself wishing he hadn't taken those phone calls from Peter Grace after all.

By Gail DeGeorge in Boca Raton, Fla.

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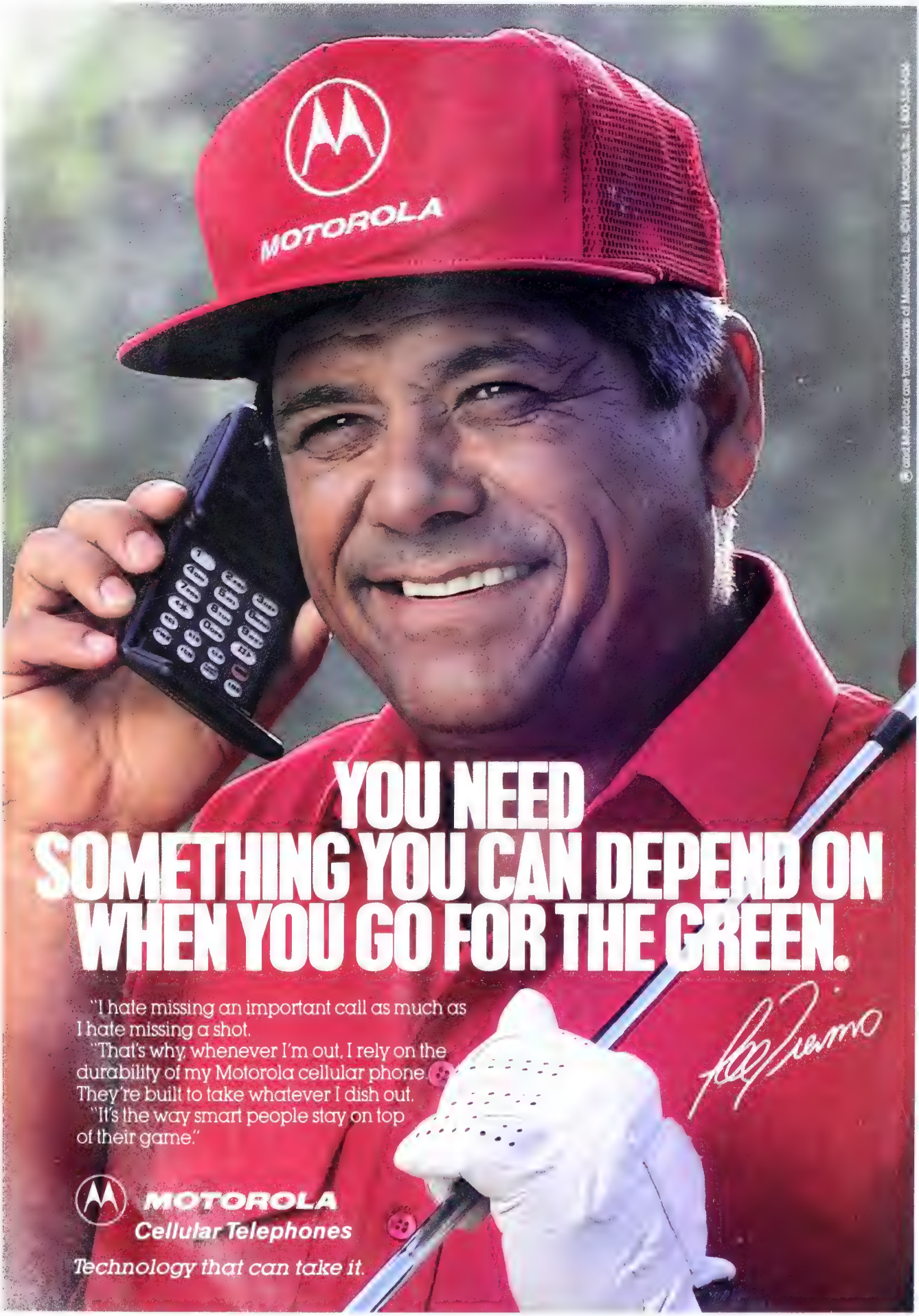
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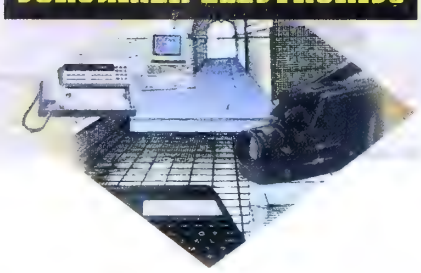

Window To The Stars

Old television sets may make interesting heirlooms and conversation pieces, but unlike fine wines and antique furniture, they don't improve with age. Anyone with a TV set more than a few years old, in fact, is missing out on a slew of improvements in performance and convenience that have been built into most major brands.

Improvements in TV sets can be divided roughly into three areas: picture performance, sound reproduction and ease of use. For the most part, those advances have come without corresponding increases in prices, though the cost of TV sets, even in any one screen size, varies more than ever because of the many different combinations of features and technologies.

Because television is a visual medium, improvements in picture performance are arguably the most significant. They are even more crucial for anyone interested in any of the new, larger screen sizes that have come into vogue over the last few years. As screen sizes have expanded into 30-, 31-, 32-, and even 35-inches, measured diagonally, manufacturers have had to work even harder to eliminate the anomalies in picture performance that might go unnoticed in smaller screen sizes.

Among the advances worth looking for: new chassis designed for greater reliability and consistent performance, higher resolution picture tubes, and advanced signal processing — in particular the use of comb filters — to reduce video noise and improve brightness, contrast and edge-to-edge sharpness.

Bang & Olufsen Home Theater: Everything but popcorn.

Some examples: Sony's use of an automatic beam limiting circuit in all of its 27- and 32-inch XBR TV sets, for better screen brightness, and a newly developed oxide titanium coating for its new 29-inch TV receiver for increased uniform brightness. RCA, Toshiba, Magnavox, Panasonic, and other major TV brands popularizing the use of so-called Invar shadow masks on their picture tubes for even color reproduction edge-to-edge — a traditionally thorny problem in larger screen sizes. Zenith's development of the industry's first truly flat picture tube, dubbed the Flat Tension Mask tube increases brightness, resolution and color fidelity. And there's development of near-flat picture tubes by Panasonic, Thomson Consumer Electronics, (which markets under the RCA and GE brands) and Toshiba, in particular, for the same reasons.

The results of all that work? Increases of 20 percent and more in horizontal resolution in some sets, with better con-

Improvements in TV sets can be divided roughly into three areas: picture performance, sound reproduction, and ease of use.

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trast and brightness. It's not hard to find models rated at 600, 700 and even 800 lines of horizontal resolution (actually, the number of vertical lines a set can display, counting across the screen), compared to the 400 to 500 line threshold achieved by sets only two to three years ago. While there are no programming sources today with horizontal resolution higher than 450 lines or so (achieved by a laser videodisc or Super VHS tape), the greater the number of lines of horizontal resolution a set can display, generally, the sharper the images will appear.

One of the problems with large screen TV sets, and projection TV in particular, is that as the screen size increases, the broadcast scanning lines that comprise a television image become more noticeable. Each television image is actually produced by two sets of alternating scanning lines every 1/60th of a second that are interleaved to create the appearance of one frame every 1/30th of a second. One way around that is to store one set of scanning lines in solid state memory, combine it with the second set and display the entire frame at one time.

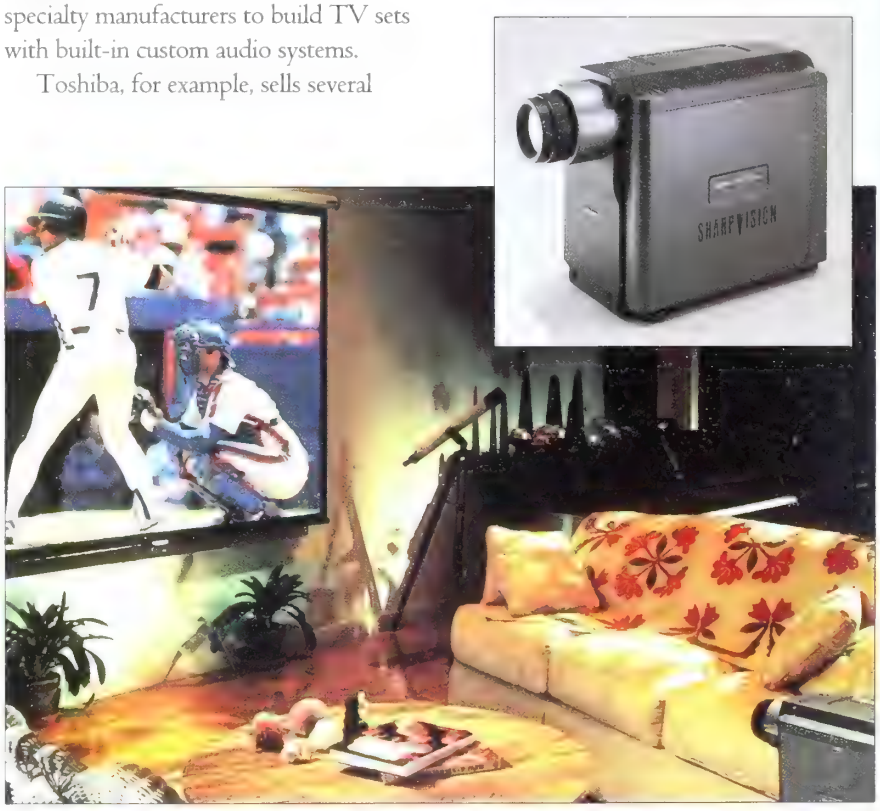
The technique is called progressive scanning and is the basis for so-called IDTV sets. In the past, Philips Consumer Electronics has brought a few IDTV sets to market, and Toshiba still carries a 32-inch IDTV set in its line. Starting later this month, or early next year, though, Thomson Consumer Electronics under its ProScan label is expected to launch a full line of IDTV sets, including big screen direct view and project TV models.

Up until a few years ago, sound reproduction was an oft-ignored issue in TV set design and manufacturing. But the development and continued growth of stereo TV broadcasting in the mid- and late 1980s — and the expanded use of television receivers in home theater systems has led manufacturers to pay more attention to how their products reproduce sound as well as images.

Many of the better TV sets now incorporate more powerful audio amplifiers and better loudspeakers. And several of the major brands have created strategic alliances with respected audio specialty manufacturers to build TV sets with built-in custom audio systems.

Toshiba, for example, sells several TV sets with so-called "Sonic Holography" sound systems designed by Carver Zenith builds several TV sets with sound systems from Bose. Magnavox and JBL have cooperated on projection TV sets and both Sony and RCA have licensed the acclaimed Sound Retrieval System developed by Hughes Aircraft Company.

Through special electronic signal processing, both Hughes' SRS and Carver's Sonic Holography attempt to recreate a three-dimensional, movie theater-like experience. And both approaches, accord-



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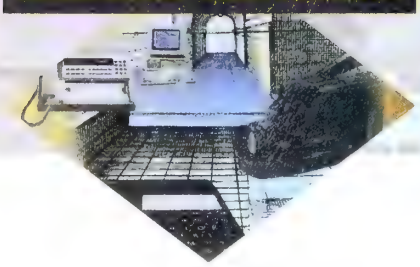
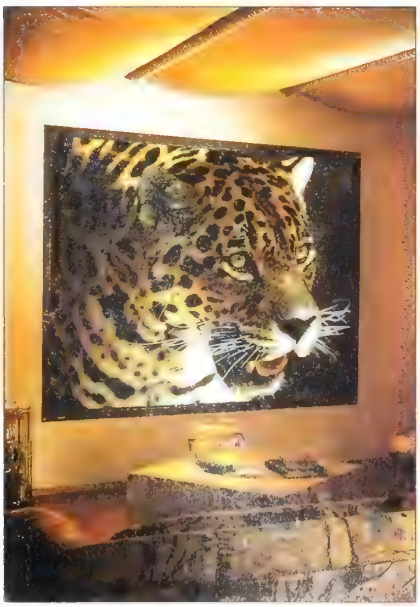


ing to numerous critical reviews, generally do a good job of delivering on that promise. Likewise, Bose, JBL, and a handful of other hi-fi companies allied with TV makers, have done an admirable job of designing audio systems geared to the special needs of television audio playback.

One of the thorniest problems in designing an effective sound system for a TV receiver is reproducing the deep bass frequencies that add a palpable presence to everything from jet fighters roaring across the screen to symphonies in a concert hall. It normally takes a large loudspeaker enclosure to faithfully reproduce low frequencies — something difficult to build into the typical TV cabinet. One interesting approach taken by Panasonic is to build the speakers into the rear of the cabinet, with front-firing speaker ports wrapping around from the rear of the cabinet to the front. The result is impressive bass response without enlarging the size of the TV cabinet.



Mitsubishi 120-inch TV: Big picture, big sound.

In the highly competitive business of designing and building the best TV sets, though, convenience features count almost as much as performance. Where would America's couch potatoes be, after all, without the hand-held remote control?

Among the convenience features that are increasingly common in the better models are sleep timers, to automatically turn off the set at a pre-programmed time, channel captioning, — an increasingly useful feature for people faced with 75 or more cable channels — and picture-in-picture.

Although a few manufacturers are building sets with two TV tuners, most picture-in-picture sets display a second channel in a small inset on screen by using a VCR connected to the set as a second tuner. A word of caution, though: Anyone who watches cable TV through a cable converter box is out of luck, since both the TV tuner and the VCR tuner will always receive the same channel.

How much will all this performance cost? That will vary widely — depending on the size of the set, features and performance, and where you live. But in general, a good 27-inch stereo TV from one of the major brands will cost $500, give or take $100 depending on the brand and how high it sits on the technological evolutionary scale.

The big jump in price comes in so-called direct view sets — where you watch the image directly from the picture tube — in the 30-inch and above category, and projection TV sets. With few exceptions, anything 30-inches and above, measured diagonally, will cost at least twice the price of equivalently-featured 26- and 27-inch models, and often more than that. And projection TV sets, with screen sizes ranging from 42- to 120-inches will cost anywhere from $1,500 or so to several times that for the largest screen sizes with enhanced signal processing and audio capabilities.

First Run Home Movies

You could always title it "Food Fight at the Olsen's Corral." If home movies are taking the place of network reruns as prime time TV entertainment for part of America, it's all because of the invention of the camcorder. The indirect descendant of super 8 home movie cameras has become a common sight at holiday family dinners, and Disneyland, as millions of American amateurs practice the fine art of capturing their family's foibles, in or out of focus.

A camcorder is essentially a miniature, battery-operated videocassette recorder with an optical lens and a solid state imaging device that converts the optical images into electronic information. At their best, they approach the performance of professional news gathering equipment of only a few years past — and, in fact, amateur news hounds, camcorder in hand, have produced some of the most dramatic footage of disasters and other dramatic events for the evening news.

But most people will buy one for

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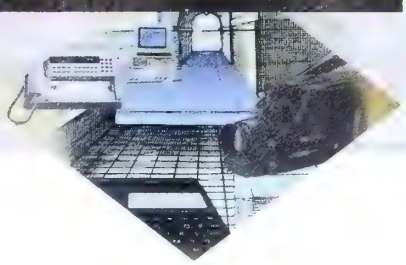

less sensational reasons. Vivid footage of children and grandchildren coming of age, memorable trips overseas or out to the shore and family gatherings at holiday times. And with such a broad variety of models and formats from which to choose, anyone looking to buy a camcorder should consider what they plan to use it for in the first place.

Camcorders are available in three major formats: full-size VHS, compact VHS, also known as VHS-C and 8mm. In addition there are enhanced versions of all three: Super VHS, Super VHS-C and Hi 8, each of which offers higher resolution performance, though tapes created with the enhanced formats are not compatible with their conventional camcorder relations.

As recently as two years ago, most Americans chose full-size VHS when they purchased a camcorder. First, tapes created on one of those models can be slipped into a VHS VCR and played without using an adapter, cables or anything else. Full-size VHS camcorders can also serve as a portable VCR for watching prerecorded tapes while on vacation. And there is an American penchant for picking bigger products over smaller ones in a sometimes misguided belief that bigger is better.

But this year for the first time, more Americans than not are choosing one of the two compact formats, with 8mm the clear favorite. That's because compact camcorders are generally half the size and weight of full-size models. And 8mm models in particular shed those ounces without sacrificing anything in the way of performance, utility or ease of use.

One notable example is Canon's UCI which, at 1.28 pounds and $1,499 suggested list price, incorporates a new compact 8X internal focus zoom lens, titling, record search and a high speed shutter that, at 1/10,000th of a second, can freeze the wings of a hummingbird in flight. Canon claims that the UCI — at least this week — is the smallest and lightest camcorder on the market, though company executives, as well as others in the industry, say any model that expects to claim that distinction in 1992 will almost certainly weigh under one pound.

Sharp Slimcam: New shape of full size VHS.

Both Canon's UCI and Sony's new TR81 make use of a new internal focus system to reduce size and weight while improving autofocus performance. The focusing element in both companies' new models has been shifted back next to the solid state imager and moves on a straight line to maintain focus. "It has to move in smaller increments to do the same work (of a conventional through-the-lens focusing system)," says Sony Consumer Video executive Jay Sato.

Manufacturers have almost twisted themselves into knots to reduce the size as well as the weight of their products. Canon, for example, mounted the lens of the UCI on top of the tape transport, rather than on the side as is common, to create a slimmer cabinet. And Hitachi has developed a series of "twist and shoot" 8mm and VHS-C models, where the grip and lens housing rotates sideways to activate the unit. The company's new $1,300 8mm version — which incorporates a digital zoom out to 64X — even includes a slim wireless remote control that slips into a slot in the camcorder for storage. In the locked position, the camcorder is only 2.3-inches wide.

Because not everyone has a rock steady grip, several manufacturers have turned to so-called "electronic stabilization" systems to ensure that even when the camcorder shakes, the picture won't.

Panasonic, the chief proponent of Electronic Image Stabilization, developed the feature for selected Palmcorder VHS-C and full-size VHS camcorders. The VHS-C PV-41, for example electronically shifts the image on the solid state imaging chip to compensate for any

NEWS RELEASE

As this special section went to press, Sharp Electronics unveiled the world's first camcorders with two built-in lenses, a "super wide-angle", with a 62° field of view and a 8x variable zoom. Both models go on sale in February.

Office Help That Works Through Lunch.

The new Samsung FX2200 will also come in early and stay late. Without complaining. Without asking for a raise.

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Especially in today's fast-paced business environment when speed is of the essence, and overnight delivery services just aren't fast enough.

With the Samsung FX2200, you get important features like one-touch dialing for 10 locations. Automatic paper cutting. Telephone answering machine interface. Automatic FAX/TEL function with outgoing message. Ten-sheet document feeder. Plus one more terrific feature: a terrific price.

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Of all the triumphs at the 1992 Olympic Games, there's one you can experience in your home. Panasonic Digital Video Technology.

A pistol is fired. Bodies are set in motion. All eyes are focused on the Olympic athletes. Behind the scenes there's a grueling contest you won't see. Covering the Olympic Games requires the agility of an athlete. To help broadcasters like NBC, Panasonic introduced the D-3 1/2-inch Digital Video System. Its camera/recorder is small, light and allows for more spontaneous coverage. Since it's digital, its image has incredible quality. While Panasonic Digital Technology helps bring the excitement of the Barcelona Olympic Games to your home, it's also helped us develop a new camcorder for your home. One so small it fits in the palm of your hand.

DIGITAL VIDEO RIVALS REALITY.

At the 1992 Olympic Games, world records will be broken. New standards of excellence will be set. But of all the triumphs, there's one you may not read about. But you'll see it and hear it every time you watch the Olympic Summer Games–Panasonic Digital Video Technology.

The Panasonic D-3 1/2-inch Digital Video System includes a lightweight Digital Camera/Recorder and Digital Studio VTRs. They make keeping up with the quick-paced Olympic Games easy. And, with the D-3 system, tapes can be dubbed and edited without any video or audio degradation. The result is a sharper picture, better sound and improved coverage of the Olympic Games.

PROFESSIONAL VIDEO COMES HOME.

The engineering, design and thinking behind Panasonic's Professional Digital Video Technology have had a strong impact on our home VCRs, TVs and camcorders. For instance, the Panasonic PV-41 Palmcorder™ camcorder is incredibly small, light and easy to handle. And it too has digital technology. Its Digital Electronic Image Stabilizer electronically helps hold the picture steady when you can't hold the camcorder steady. It also has an advanced 12 to 1 digital zoom.

HUMAN ELECTRONICS.

Digital video technology that can capture the excitement of the Olympic Games is at the core of what we call Human Electronics. Every day we dedicate ourselves to creating new technologies and marketing new products that make life richer, safer and more comfortable. This dedication results in a single-minded philosophy: Don't create technology for technology's sake, but for man's sake.

Panasonic
MATSUSHITA ELECTRIC

Canon UC1: This slim yet feature-packed 8MM is currently the smallest and lightest camcorder on the market.

jittery movements of the camcorder to maintain a stable image.

JVC, which developed the VHS-C and VHS formats — and, along with Panasonic, is the chief adherent of the VHS-C format — is considering adding the feature to its line in 1992.

"Camcorders today have capabilities that stagger the imagination," asserts Foy Wilkie, video products manager for Thomson Consumer Electronics, which sells all three formats under the RCA and GE brand names. He points in particular to the evolution towards digital signal processing over older analog designs, where uniform performance "is literally baked into the integrated circuit design." The result is consistent color reproduction, better control under difficult shooting conditions, such as back lighting and increased signal-to-noise ratio for crisper, more vivid images.

There's always the danger of relying too much on specifications, particularly when it becomes more of a horsepower race than anything else — and when measurements differ from one manufacturer to another. Such is the case with lux ratings, which provide an indication of a camcorder's ability to shoot pictures under low lighting conditions.

"Too many people use a lux rating on a camcorder as the primary consideration, notes Canon's Mike Zorich. "We're not comparing [equally] from one brand to another."

Because there is no industry standard, manufacturers differ in how they measure light sensitivity, and one brand's four lux rating might, for example, prove equivalent to another's three lux rating. And even that difference can be misleading.

For a point of reference, one foot candle of lighting is equal to 10 lux. With most current camcorders, regardless of format, rated at five lux or below, just about any model on the market will produce an acceptable image under all but the most difficult lighting conditions. And besides, anyone using a camcorder for undercover nighttime surveillance should be looking elsewhere for the right equipment.

On The Road: Hand Me My Office

In the old days, most of the electronics you'd need to create an office on the road would fit neatly inside a moderately sized suitcase. That just won't do anymore, in the 90s, when everything from a personal diary-cum-fax machine to a complete reference library will fit in the palm of your hand.

Handheld portable office electronics generally fit into two categories: so-called handheld organizers that will store phone numbers, appointment calendars, expense reports and just about anything else that can be entered through their miniature keypads, and reference devices that contain encyclopedias, dictionaries and even the bible for those requiring inspiration when the road gets tough.

Two of the major developers of handheld organizers, Casio and Sharp, have taken a basic concept — essentially

a handheld database with limited random access memory — and have expanded it into a dizzying array of new areas and applications.

Sharp's $399.95 suggested list priced model OZ-8200, for example, has 128K random access memory — twice that contained in the original IBM personal computer — an eight-line, 40-character LCD display and built-in communications software for use with external pocket modems.

Sharp, in particular, has developed an impressive series of add-on cards for its line of Wizard organizers. They include a personal computer communications link with built-in conversion for Lotus 1-2-3 files, a 4800 baud pocket fax/300 baud modem card with communications software that slips into the add-on slot of the Wizard, language translation IC cards, and even games.

Still, Gil DeLiso, director of Sharp's Wizard division, asserts that personal organizers still have barely touched their potential. "We're looking at the possibilities for wireless communication (with the Wizard)," he says. "If you're going to have access to and manage data, then you want to be connected to that database no matter where you are."

DeLiso envisions building paging and other wireless data communications capabilities into future generations of Wizards.

Organizers are still relatively limited when it comes to storing vast amounts of information. The need to access large reference works in a portable form has spawned the development of a growing category of handheld storage devices.

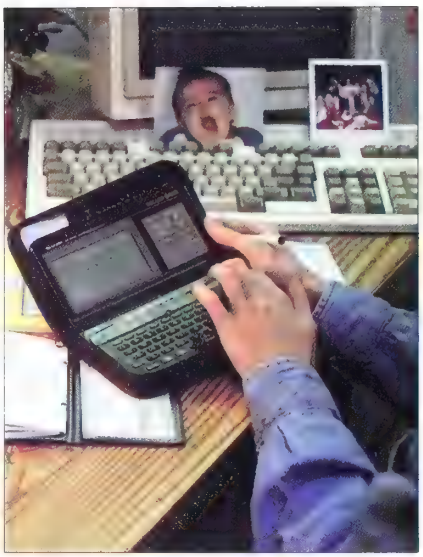
One of the first companies to recognize the potential market for these devices was Franklin, which over the past few years has developed a line of handheld electronic foreign language dictionaries, encyclopedias and related devices. Its Columbia Electronic Encyclopedia, for example, contains the entire text of the one volume encyclopedia.

Although most handheld reference products are so-called dedicated devices — the information is built into the device — a new generation of devices aims for a broader application.

Sony's Data Discman is a handheld optical disc reader with LCD display and built-in data search software. But the actual reference volumes are stored on interchangeable three-inch CD-ROM-like optical discs.

As this section went to press, Sony was scheduled to begin shipping the first Data Discman units to stores, each bundled with three discs: Compton's Concise Encyclopedia, Houghton Mifflin's Wellness Encyclopedia and the World Travel Translator from Passport Books. The Data Discman will sell initially for $549, suggested list price with the three titles.

Franklin's Columbia Electronic Encyclopedia contains the entire text of the one-volume encyclopedia.



Sharp Wizard: Electronic diary and much more.

"I would not expect, initially, that people would read novels on it," says Mike Vitelli, president of Sony Personal Audio Products Company. "But a businessperson will be able to take vast amounts of reference materials on the road." Each disc, says Vitelli, can store any combination of 100,000 pages of text or 32,000 graphic images.

A Pocket Full Of Long Distance Miracles

Until manufacturers add a wrist strap and perhaps a minute and hour hand, cellular phone makers will have to accept the reality that their products are approaching a point of diminishing returns on miniaturization. Far from a negative, that says a lot about the progress the industry has made producing

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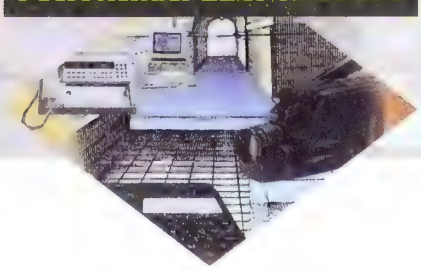


phones that are smaller and lighter than once seemed possible.

"Everyone makes a small, lightweight phone now," notes Rick Del Guidice, national marketing manager for Panasonic/Technics Mobile Electronics. "The focal point of most major introductions is size, weight and talk time."

In what often seems to be a game of technological leapfrog among cellular phone manufacturers, Motorola is the current leader of the pack when it comes to downsizing. Motorola's 7.8-ounce handheld model, with between 50 and 60 minutes of talk time between charges on a standard battery, represents about a 50 percent reduction in weight over its ground-breaking pocket cellular phone introduced only two years ago.

But even there, Motorola holds only the barest lead over Fujitsu and given the pace of development in cellular phone technology, it's a good bet that some manufacturer will slice an ounce or so more off that record sometime in the next few months.

Panasonic's cellular phone.

But there's some question of how far manufacturers can go. "Phones are progressing to the limitations of ergonomics," asserts Del Guidice. "They still have to stretch from the ears to the mouth, and you still have to be able to push the buttons. The struggles to make the smallest and lightest phones have reached their logical conclusion."

Del Guidice and other cellular phone experts say that design work will increasingly focus on displays, ease of use and power conservation to increase talk time. Indeed, concedes one industry executive, "Battery technology has lagged behind the electronics."

On the way, perhaps as soon as next year, a new generation of phones that use hybrid battery technology that could double or triple the power capabilities of comparably-sized conventional batteries.

Handheld phones still lack some of the performance of car and transportable models, in large part because of power output limitations. But there's no question that handheld cellular phones represent the focal point of industry research and development. Although handheld models generally cost upwards of $1,000 — far more than car and transportable models — they represent the technology leaders for Fujitsu, Audiovox, Mitsubishi, Motorola and other major manufacturers. By some estimates, handheld phones will account for 60 percent of the more than two million cellular phones that will be sold this year.

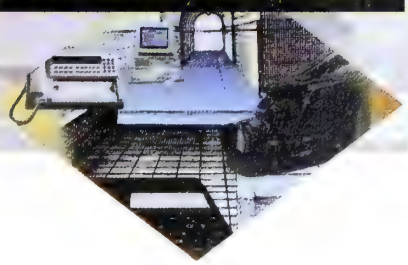
That could tilt even further in favor of handheld models if developments in cellular service announced earlier this year began to pan out. The rise of regional and even nationwide cellular networks — where a subscriber in one market has seamless access to cellular service in other parts of the country — could stimulate the use of handheld cellular phones by business travelers as they move from one city to another.

When Your Home Is The Office

More than one in three Americans has some form of a home office, according to a recent study conducted for the Electronic Industries Association/Consumer Electronics Group. While some of those offices undoubtedly are limited to a desk, telephone and perhaps a typewriter, more and more of them incorporate a growing array of electronics designed to help workers at home duplicate the output of their counterparts in corporate America.

Where it might have taken $3,000 or more a few years ago to adequately outfit a home office with a personal computer, fax machine copier and other, related electronics, technological advances have made it possible to buy comparable equipment for almost half the cost.

"We have a lot of customers who start with our Powerflex (PCs) in the office and decide that's what they want at home," says ALR marketing vice president, David Kirkey. While few home offices had anything more sophisticated than a 286-based PC just a few years age, Kirkey notes that many home office workers now opt for more powerful 386



and even 486-based machines.

The reductions have been perhaps most dramatic in fax machines, where entry-level models are available in many stores for less than $400. Add an IBM-compatible 286 computer for well under $1,000 including basic software, a personal copier for another $400 and you have the makings of a serviceable home office at a relatively modest investment.

In many cases, those less expensive models come with more features and performance than their older counterparts. Just about all but the cheapest fax machines, for example, now incorporate automatic paper cutters and multiple-page memory — the ability to store incoming messages when the machine runs out of paper.

THE PLAIN FAX

Fax machines now appear to run a close second to personal computers as the one piece of electronics the well bred home office worker requires to run a successful business. While attractive pricing has certainly helped stimulate sales, the steady spillover of advanced fax technology from office units into home office models is perhaps even more important.

And the single most important advance beginning to affect home office fax machines is plain paper technology. The advantages are compelling: a lower cost per page and more durable copies.

"The goal is to have them for under $1,000 says Denny McGlaughlin, an executive in Sharp Electronics' Personal Home Office Electronics Division. "It's coming, and in the near future."

Anyone with a personal computer can add plain paper fax capability quickly and relatively inexpensively by purchasing a fax board that plugs into their computer.

There are several advantages to buying a fax board and few disadvantages.

Fujitsu Imaging Systems of America's plain paper fax, the dex 530E

First, the positives: Since the fax board is connected to the PC, any documents you create on the computer can be transmitted directly without going through the printer. And because incoming messages are stored in the computer, there's never any worry about running out of paper. Many fax boards come with their own memory, so they can transmit and receive while the computer is handling other tasks.

Among the drawbacks: Unless you own one of the more powerful personal computers, incoming faxes will slow you down, anywhere from a 10 percent reduction in processing speed for 386 models on up to 50 percent on an XT-compatible.

Ultimately, though, most, if not all of those functions will be combined in the equivalent of a local area network for home office electronics. The concept: one laser printer that will accept data from a fax unit, copier or a personal computer, in fact, an ability to share data from any one of those components to another.

"We're working on it, but it's not here yet," says Bill Kopp, vice president of Panasonic's Communications and Home Office Electronics division. " (The problem is) all of those technologies are advancing at different speeds."

PERFECT COPIES

Commercial copy centers might not like it, but personal copiers are becoming more accessible and affordable for home office workers. They're not designed for sophisticated tasks, such as color copying

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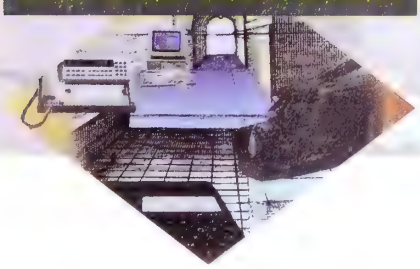

and huge enlargements, but home office copiers don't give up that much in the way of features and performance compared to models typically found in a corporate office.

What really separates a personal copier from commercial models is speed. Most personal copiers are hard pressed to churn out 10 copies per minute, compared to the 15 to 20 copies or more per minute of a standard office copier. That's not a drawback in a one- or two-person home office, but personal copiers are aptly named.

Still, even the inexpensive personal copiers will do more than the single-sheet models prevalent just a few years ago. Sanyo's SFT-50, for example, available in many stores for under $500, will make up to 20 copies per document. And mid-range personal copiers from Canon, Sharp and other major brands can handle enlargements, reductions and other common tasks.

They'll copy your invoices in triplicate, if you like. They just won't make sure you get paid.

Sharp's Z75 personal copier.

Good Hi-Fi On The First Try

Not so many years ago, a well known audio tape manufacturer kept asking a seductive question: "Is it live, or is it...?" Given the quality of even modestly-priced hi-fi gear, the answer to that query is more difficult to come by than ever.

In a broad sense, there are two basic ways to assemble a hi-fi system. First, buy a complete package — compact disc player, tape deck, receiver and loudspeakers from one manufacturer — or pick and choose among the different individual components sold by different manufacturers.

Which is the better approach? The modern hi-fi industry began in the 1950s with an emphasis on complete packaged systems. But as different companies developed a particular expertise hi-fi cognoscent began to take a mix and match approach, arguing that it was better to take the best from different manufacturers.

Now, however, there's a growing trend back, though not without a degree of controversy. "Overall system design is the way to go and components are not," argues Dr. Amar Bose, an MIT professor and founder of the loudspeaker company bearing his name. "It's very fundamental to engineering."

But many other industry experts insist that a component approach sacrifices little or nothing in the way of performance and provides greater flexibility in purchasing and upgrading.

For now, at least, the best approach is probably a matter of personal taste — and budget. Brand name components

Philips FR-60 Receiver: 60 watts, A/V switching and more.

allow a consumer to build a hi-fi system one component at a time, while a system approach eliminates much of the confusion.

More often than not, what separates one manufacturer's audio receiver from another's are the features and extra capabilities they build into their products.

Many of the better receivers — a combination tuner/power amplifier and pre-amplifier — now include digital signal processing, surround sound processors and audio and video switching.

The most common form of digital signal processing, first popularized by Yamaha, essentially is a computerized method of recreating different listening environments. Hit a button, for example, and that Bach fugue on the CD player sounds like it's coming from a cathedral in Munich, not your living room.

Surround sound and audio/video switching is particularly important for anyone who will use their hi-fi system with a television set and other video gear to create a home theater.

To take advantage of surround sound in a home setting typically requires a

Better Windows

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QEMM 386 makes the most of every last 'K'. DESQview uses that memory to run multiple programs.

Multitask
Run multiple programs side-by-side in windows. 'Background' programs can continue to run.

See text and graphics side-by-side
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Run Windows programs
DESQview even lets you run Microsoft Windows.

Easy menu access to programs and DOS services
Access programs or DOS in a window with just a few keystrokes or mouse clicks. It's that simple.

See multiple files
If your programs allow it, DESQview lets you run the same program in two or more windows. Great for comparing files

Cut and paste data
Transfer data between programs with a few keystrokes.

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Run standard DOS programs side-by-side with DOS-extended programs like 1-2-3 Release 3.

DESQview. The Multitasking, Windowing Environment.

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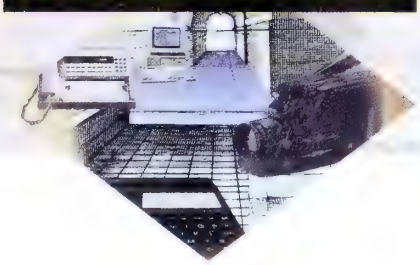

small pair of speakers for the rear channel. And in the case of Dolby Pro Logic, a more advanced form of the basic surround sound processing, another small speaker to reproduce center channel information.

LOUDSPEAKERS FOR THE PURIST

Choosing a loudspeaker, in fact, may well prove to be the most critical decision in assembling a good hi-fi system.

"The biggest limitation in sound reproduction has been the two ends: the turntable pickup at one end and the loudspeaker at the other," asserts Bose. "The compact disc eliminated the problem (of turntable limitations) and that leaves the loudspeaker as the major determinant of what you get."

And when it comes to a choice of loudspeakers — perhaps the most critical choice facing the average consumer — the best, and most direct strategy, is to let your ears make the decision.

More than any other segment of home audio equipment, loudspeakers are the product of the personalities — of their designers; electronics makers have concentrated on reproducing as accurately as possible the signals derived from disc and tape recordings.

While many loudspeaker makers strive for a so-called "flat" response — what goes in comes out with no "coloring" of the sound — different speakers tend to have their own charateristics.

Those differences reflected attempts on the part of speaker designers to compensate for the limitations of audio tape decks and turntables to accurately reproduce a live music experience, and some manufacturers designed speakers for a particular style of music.

But the advent of the compact disc and other digital audio sources has put a premium on loudspeakers with a flat response.

"There's a general trend to a more lifelike sound," notes Art Blumenthal, general manager of Acoustic Research. "As each company gets better (at design) the distinctions are fading."

Blumenthal points out that his company and others have refined their work on crossovers — the "electronic switches"that divide a signal from an amplifier into low, mid-range and high frequencies so they can be routed to the appropriate loudspeaker driver.

That's not to say all speakers will sound alike; there are still huge differences in quality from one end of the spectrum to the other. And some speakers require more power than others to live up to their promise.

There are also more different configurations than ever to choose among: large floorstanding speakers, small bookshelf speakers, designed to be installed in a wall, and so-called "satellite" systems combining very small mid/high-range speakers and separate sub-woofers.

Among the more distinguished manufacturers of floor standing and bookshelf loudspeakers: A-R, KEF, JBL, Infinity, Bose and a/d/s. Sonance, a/d/s and Boston Acoustics all make well-respected in-wall loudspeakers. And in the satellite category, Bose, with its Acoustimass system, Design Acoustics and a/d/s have been prominant participants.

AR M6 Speakers: Focus on better imaging.

The Electronic Industries Association/Consumer Electronics Group is best known as the sponsor of the International Winter and Summer Consumer Electronics Shows. Both events, after all, draw more than 70,000 manufacturers, buyers and industry related workers from around the world.

But the consumer electronics arm of the 66-year-old EIA plays a much broader role for an industry that will excede $45 billion in retail sales this year in the United States, based on steady growth in relatively new gear such as camcorders, compact disc players, and the familiar color TV sets.

The EIA/CEG's statistical services, chart the sales of everything from home computers to car stereos on a weekly basis, in order to provide regular "snapshots" of industry trends and developments. The organization also works with the Department of Commerce to track consumer electronics imports and exports.

The Washington-based association, has developed into a powerful information and lobbying source. Revenues generated by the two Consumer Electronics Shows fund these activities.

This text was written by Martin Levine, who specializes in consumer electronics and home entertainment.

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SONY

DAVID MULLINS' BRISK STRIDE AT THE FED

Vice-chairman since July, he's a key player in regulating finance

Before David W. Mullins Jr. testified to Congress on the Salomon Brothers scandal, he made a bet with Federal Reserve Board Chairman Alan Greenspan. Mullins, the Fed vice-chairman, predicted that he would not be asked a single question. He lost the bet, but it was a close call. Congressional interrogators, intent on blaming the Treasury Dept. and other regulators for the Salomon affair, virtually ignored the dry, professorial Mullins.

That was their mistake. Just three years after coming to Washington from teaching at Harvard business school, Mullins has emerged as a key behind-the-scenes figure in U. S. financial regulation. Bankers with bad news to report find themselves in Mullins' office, just down the hall from Greenspan's. His views on modernizing American finance are shaping the Fed's position on bank reform. And recommendations for an overhaul of the scandal-shocked Treasury markets, due from regulators this month, are sure to bear Mullins' mark.

HAWK OR DOVE? The Fed's vice-chairman, a job the 45-year-old Mullins has held since July, traditionally takes charge of regulation. But Mullins brings more to the job. He has a deep knowledge of corporate finance and a wide-ranging network of contacts throughout government, banking, and Wall Street. "David really does understand financial markets," says an official of one regional Federal Reserve Bank, "and that has not been an area of strength for the [Fed] board."

Mullins doesn't get the same high marks for his views on monetary policy. Observers at the Fed's closed-door meetings say that his colleagues still are not sure whether he is a hawk or a dove on inflation. Still, his financial expertise is making him more influential, as other Fed officials realize that the ills of the banking system are helping prolong the nation's economic malaise. His analyses of credit flows helped Greenspan persuade reluctant Fed governors to resume cutting interest rates as last summer's recovery faded. Like Greenspan, Mullins believes the economy is still growing but is being hobbled by corporate efforts to cut debt loads and by bankers who are reluctant to lend to any but the best borrowers.

Garnering power in Washington was never one of Mullins' ambitions. The son of a former president of the University of Arkansas, he took naturally to academia. After graduating from Yale and earning a PhD in finance at Massachusetts Institute of Technology, Mullins joined the Harvard faculty in 1974.

Although his teaching earned him top ratings from students, he built his reputation on research. Mullins and MIT's Paul Asquith caused a stir when they demonstrated in 1989 that junk-bond investors faced a one-in-three chance of being wiped out if they held their paper for 10 years. Junk-bond backers, who boasted of short-run default rates of less than 3%, attacked the study—but were silenced six months later when the junk market collapsed.

As a finance whiz with a practical bent, Mullins earned up to $500,000 a year as a consultant on Wall Street. He testified for both acquirers and targets in takeover cases, depending on which side was promoting free and open capital markets, he says. He supported Carter Hawley Hale's defense against The Limited, but testified against Household International's poison pill. His work on Euromarkets convinced him that "traditional banking as we know it is being left behind," Mullins says. "Corporations have lots of ways to bypass institutions that tack three percentage points of noninterest expense onto the cost of money."

BAILOUT BARD. Those consulting contacts set Mullins on the path to the Fed. When Nicholas M. Brady, then chairman of Dillon, Read & Co., was tapped to probe the October, 1987, stock market crash, Brady's associates suggested that Harvard's Robert R. Glauber and Mullins run the study.

Brady, named Treasury Secretary in 1988, soon called

MULLINS: EXPANDING THE ROLE OF HIS OFFICE

THE ECONOMY, THE BANKS, AND THE MARKETS—ACCORDING TO MULLINS

THE ECONOMIC OUTLOOK The economy is recovering, but too slowly. Unlike the inflation hawks on the Fed, he has argued in favor of an easier monetary policy. He fears an extended period of slow growth now will make it harder for the Fed to fight inflation in the future

BANK REFORM Banks should be deregulated and allowed to compete with brokerage, insurance, and finance companies on an equal footing. Industrial companies should be allowed to own banks

STOCK MARKETS The power to oversee trading in stocks, stock options, and stock-index futures should be centralized in a single agency—the Securities & Exchange Commission

GOVERNMENT SECURITIES MARKETS Mullins is pushing to automate Treasury auctions and experiment with new auction techniques. He believes heavy regulation of this market is unnecessary

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to ask Mullins what he knew about savings and loans. "I never should have answered that question," Mullins says. As Assistant Secretary for domestic finance, he worked with Under Secretary Glauber to draft the S&L bailout package and shepherd it through Congress in 1989. Fed Governor H. Robert Heller resigned just as the S&L bill was wrapped up, and Mullins made a bid for the job—surprising Glauber, who thought his old friend would go back to Harvard.

Mullins was drawn both by the Fed's power and its quasi-academic style. The Fed's staff of PhD economists welcomed him: "I told him, 'We always wanted to hire a corporate finance expert, but I never knew they'd work so cheap,'" says Deputy Research Director Edward C. Ettin. (Mullins will earn $115,300 this year.) And Mullins fits right in at the central bank. "The Fed is a big debating society, and David is a great debater," says Glauber.

At meetings, Mullins takes the floor with a yellow legal pad covered with scribbled notes—color-coded, in some cases, into main themes, secondary points, and bits of evidence. He leavens his fast-paced presentations with dry humor. How could Salomon expect to get away with bidding violations, he asks, in a market full of dealers "who'd turn in their grandmother for a quarter of a point?" Listeners who can't keep up may be left feeling like the class dullard: "David doesn't suffer fools," says a former Treasury colleague.

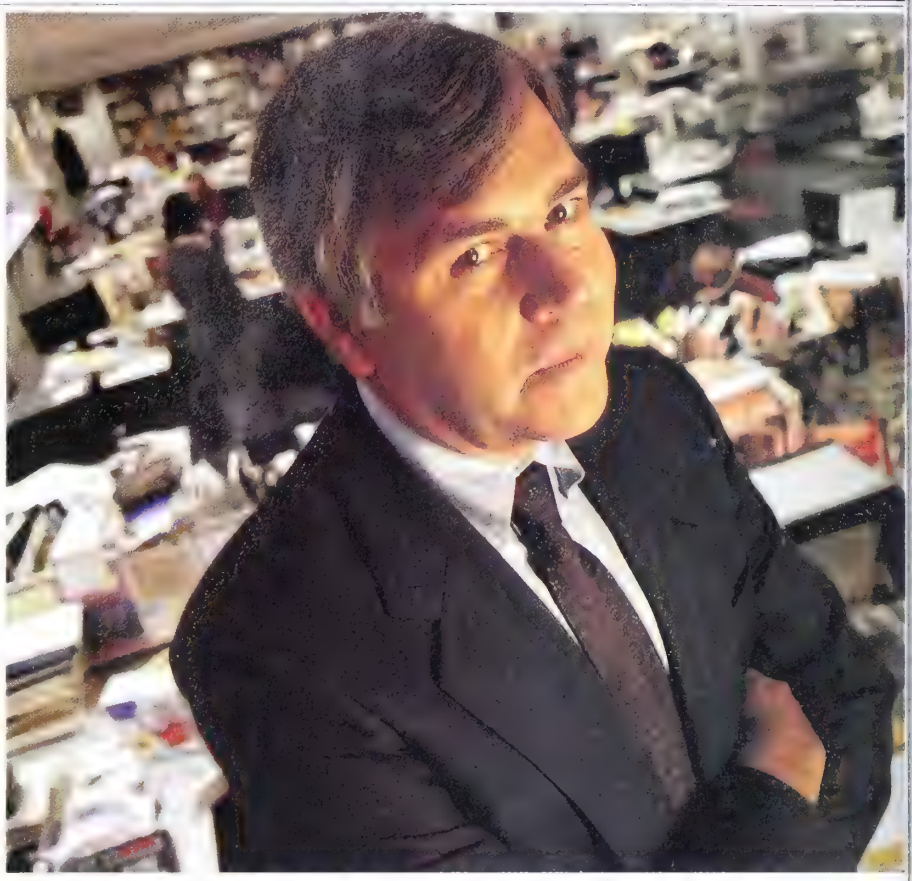
GETTING HIS WAY. Mullins' goal for the U. S. banking and financial system is to drag it into the 21st century. He was appalled last summer by Salomon's admission that it broke Treasury rules, but he could barely contain his glee that the scandal created an opportunity to overhaul Treasury's antiquated auction system. If Mullins has his way, the regulators later this month will propose computerizing Treasury offerings to break the market power of big dealers, coupled with streamlined monitoring to prevent future squeezes like that garnered by Salomon last May.

And Mullins is getting his way more often—even on monetary policy. When the Fed's policymaking Open Market Committee met on Nov. 5, Professor Mullins set aside his scrawled notes on yield spreads in the bond market, the tone of the stock market, and foreign-exchange sentiment to zero in on the crucial issue: fears of consumers, manufacturers, and retailers. "That's not his area of expertise, but he hit it hard and he did a good job," says a Fed staffer. Many Fed policymakers were skeptical going in, but Mullins prevailed. The next day, the Fed cut interest rates. That's the sort of clout that really counts.

By Mike McNamee in Washington

Media

NEWSPAPERS



CEO CURLEY: FINALLY BEGINNING TO PUT HIS OWN IMPRINT ON THE COMPANY

PATCHING THE CRACKS IN THE HOUSE THAT AL BUILT

Neuharth is gone, and Gannett is straining under its own weight

Maybe it was expecting too much. When Allen H. Neuharth retired two years ago, the voluble chairman of Gannett Co. said he wouldn't publicly second-guess his handpicked successor, John J. Curley. Indeed, in a recent interview, he vowed to stick only to "statements of fact."

So what does Al Neuharth think of Gannett now? In one such "statement of fact," Neuharth notes he "led Gannett through five recessions with 88 consecutive quarters of record profits." Hanging in the air is a pointed comparison: Under Curley, earnings at the nation's largest newspaper chain dropped 5.2% in 1990, to $377 million, on revenues of $3.4 billion. And analysts predict they'll tumble an additional 20% this year (chart).

Curley brushes off Neuharth's comments with a curt: "That's Al." It's no wonder that Curley rarely calls his one-time mentor these days. Not only is he battling the worst advertising downturn in two decades, but the former newspaper editor is also struggling to untangle much of Neuharth's handiwork.

'SOLID GROUND.' Neuharth earned his 88 quarters of growth with a simple strategy. Gannett snapped up newspapers in small monopoly markets and then wrung additional profits out of them through cost-cutting. In flush times, the strategy worked marvelously, enabling Neuharth to transform Gannett from a sleepy chain of small-market papers into a $3 billion media powerhouse.

But when the supply of independent papers began drying up, Neuharth changed his game plan. In 1982, he launched his national newspaper, *USA Today*. In the mid-1980s, he acquired pa-

ers in larger, fiercely competitive markets such as Little Rock and Detroit. And he dabbled in TV programming by bankrolling a joint venture with producer Grant Tinker. Few of the new ventures fared well (table). *USA Today* continues to bleed. And Gannett recently sold off the *Arkansas Gazette* after it was trounced by a crosstown rival.

Now, Curley has a daunting task: He must figure out how to jump-start Gannett's growth in an industry that's losing readers and advertisers to rival media. The trouble is, Gannett seems unable to wean itself from newspapers.

That may have something to do with the CEO's ink-stained pedigree: The 53-year-old Curley was publisher of a Gannett paper in Bridgewater, N. J., before he was picked by Neuharth to be the first editor of *USA Today*. With his rolled-up shirtsleeves, he looks like a career city desk editor—a stark contrast to Neuharth's glitzy image. Curley insists newspapers provide "good solid ground" for faster growth.

But some media experts give him a less-than-even chance: "Gannett is not going to be capable of the growth you'll see from other media companies," says Robert Picard, editor of the *Journal of Media Economics*. Gannett's return on equity remains one of the highest in the industry. But Susan L. Decker, an analyst at Donaldson, Lufkin & Jenrette Securities Corp., expects the company to boost its earnings by a total of only 15% over the next three years—half the projected average for 12 publicly traded newspaper companies.

TENTATIVE SHOPPER. Gannett's critics say the company is handicapped because it passed up opportunities to diversify into less ad-dependent media, such as cable TV or business information services. Gannett now draws 80% of its revenue from newspapers, compared with 57% at Times Mirror Co. and 71% at Tribune Co. And the other businesses it did push into—billboard advertising and broadcast television—have hardly insulated Gannett from the ad slump. Analysts figure that Gannett's billboard earnings will drop 33.3% in 1991, while its broadcast earnings will drop 15.9%.

True, new ventures such as business information services haven't proved a gold mine for newspaper chains, as Dow Jones & Co.'s troubles with its Telerate Inc. subsidiary attest. Neuharth defends his strategy, saying Gannett made shrewder investments in papers than it would have in any other media. With Gannett, he may have a point: What moves the company has made to diversify have been tentative or ill-conceived.

Take its foray into the yellow pages business. Gannett told media analysts its first effort to distribute a yellow pages directory, in Brevard County, Fla., would in time turn a pretax profit margin of 25%. Eighteen months later, Gannett sales reps have told some advertisers that the venture is losing as much as $50,000 a month.

And even some of its newspaper acquisitions have been troubled—especially where Gannett tried to break into competitive and close-knit markets where it had no strong local connections. The *Arkansas Gazette* is a woeful case in point: Despite Gannett's greater financial muscle, Walter E. Hussman Jr., publisher of the rival *Arkansas Democrat*, used his local ties to persuade Little Rock advertisers to support his paper. Gannett sold out to Hussman in October after losing an estimated $100 million in a five-year battle. Says Curley: "It's a market we shouldn't have gone into in the beginning."

The company also seems to have miscalculated in Detroit. In 1989, Gannett tried to end a bloody war between its *Detroit News* and Knight-Ridder Inc.'s *Detroit Free Press* by signing a joint operating agreement to share business and production tasks. The two companies were also to divvy up the profits, projected at $100 million annually. But the papers angered advertisers by hiking rates. And by dropping its morning edition as part of the deal, the *News* lost 35% of its 689,000 subscribers, while the *Free Press* lost just 4%. Both will probably lose $5 million this year.

Then there's *USA Today*, which is looking more and more like a costly relic of the Neuharth era. The paper has racked up aftertax losses of more than $350 million in its nine-year run. It has yet to turn its first annual profit and will lose $18 million this year. Publisher Thomas Curley, John's younger brother, points out that circulation is now 1.8 million and still growing. And he predicts McPaper will break into the black in 1992, thanks partly to ads for the Olympic Games and political campaigns. But some media analysts believe *USA Today* may be condemned to marginal profitability for years to come because the huge fixed cost of the paper's national distribution limits Gannett's ability to squeeze much savings out of it.

NEWS 2000. If the legacy of Neuharth's ambition isn't enough, John Curley must also deal with Neuharth himself. Since 1989, Neuharth has been lobbing grenades from his perch atop the Freedom Forum, a nonprofit organization once called the Gannett Foundation. Last year, he threatened to sell the foundation's 10% stake in Gannett, claiming its 3% dividend was inadequate to a nonprofit. Rather than risk having Gannett put into play, Curley grudgingly paid $670 million to buy back the shares. As part of the deal, Neuharth dropped the name and ties to Gannett.

In other ways, Curley is finally putting his own imprint on the company. Earlier this year, he unveiled a program called News 2000, which uses market research to influence the content of Gannett papers. He is also encouraging publishers to innovate: The *Reno Gazette-Journal*, for example, is rewarding frequent readers with cards that offer them discounts at area merchants. In nine months, the paper reduced subscriber turnover from an annual rate of 62% to 48%. Curley also says he is spending more than $40 million this year to develop new ventures, such as a weekly baseball tabloid and a radio news service for airline travelers, both of which use the *USA Today* name.

But there's no doubt Curley's heart remains in newspapers. Indeed, with prices for media properties dropping, one Gannett executive even hints the company may start buying again. But given the industry's and Gannett's woes, Neuharth's newspaper-gobbling strategy may have retired with him.

By Dean Foust in Arlington, Va.

CURLEY BATTLES NEUHARTH'S LEGACY...

Several of the former chairman's new ventures and acquisitions have cost Gannett since his departure

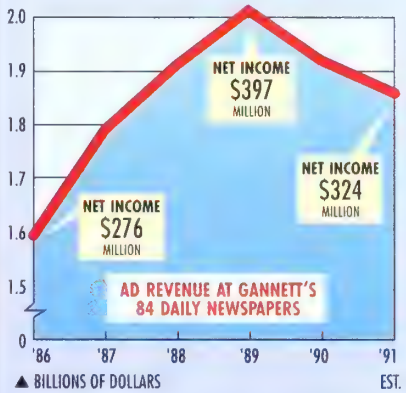
USA TODAY Has run up aftertax losses of $350 million since 1982. Losses this year will total $18 million

GTG ENTERTAINMENT Joint TV-show venture with Grant Tinker lost $59 million before Gannett pulled out in 1989

ARKANSAS GAZETTE Little Rock daily was sold to archrival *Arkansas Democrat* after $100 million in operating losses

DETROIT NEWS May lose up to $5 million in third year of joint operating agreement with rival *Detroit Free Press*

...AS AN AD SLUMP TRIMS PROFITS



DATA: COMPANY REPORTS; SMITH BARNEY, HARRIS UPHAM & CO.

CHART BY ALBERTO MENA/BW

TODAY, THE STONES. TOMORROW, STALLONE?

Imax is wooing Hollywood with its huge-screen technology

Rock promoter Michael Cohl has long felt that concert films don't capture the primal energy of rock 'n' roll. So when Cohl was organizing the Rolling Stones' Steel Wheels world tour in 1989, he suggested they film it using big-screen technology developed by Imax Corp. Since Imax films are typically shown in museums, the group was skeptical, but in the end they agreed.

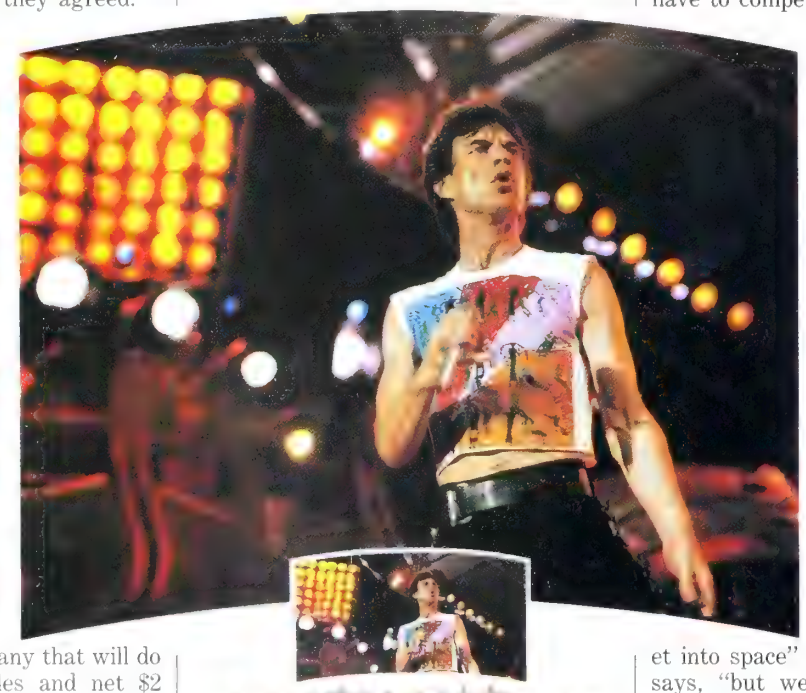
Their film, *At the Max*, which opened in New York in late November and is now playing in 14 cities, is a runaway success. *Variety* gushed that seeing the Stones on an enormous six-story-high screen makes previous concert films "look like the visual equivalent of vinyl records."

That's not all. The Toronto-based Imax is rolling out three new film technologies—two new 3-D technologies plus a "high-definition" system. They play on huge 60-to-70 foot screens, compared with the 15-foot screens found in many commercial theaters.

Imax is a private company that will do about $50 million in sales and net $2 million to $4 million this year. If it can beat out growing Hollywood competition in the big-screen market, Imax may vault into the cinematic big leagues.

'BETTER THAN DISNEY.' The success of *At the Max* follows a similar commotion in Japan last year when one of Imax' new 3-D technologies, called Imax Solido, premiered at Osaka's Expo. Developed with Fujitsu Ltd., Solido creates images more lifelike than anything ever created before on celluloid. At Osaka, people became so immersed in the film—*Echoes of the Sun*—that they grabbed at objects that appeared to be floating in front of them.

A second film, *The Last Buffalo*, is exciting the theme-park industry. It uses yet another 3-D technology called Imax 3-D. "The gold standard [in theme parks] is Disney," says James H. Wintrode, president of Six Flags Great America, a theme park outside Chicago that premiered *The Last Buffalo* in the U. S. last summer. "But Imax 3-D is better than Disney." Indeed, lines for the film were so long that Six Flags boosted daily showings to 16 a day, and 1.1 million people saw it.



Big attraction: Imax Corp.'s six-story screen makes conventional screens look tiny

Imax first unveiled big-screen filmmaking in 1970. Museums found that an Imax theater "attracts a whole new audience and is a wonderful source of revenue," says Freda Nicholson, executive director of North Carolina's Science Museums of Charlotte. There are now 77 Imax theaters in North America, Japan, and Europe, mostly in museums. Together, they sell 30 million tickets a year. Next year, 20 theaters will open.

But there's the rub. Imax' success is built on museum and theme park theaters. For its radical technologies to really take off, it needs a large chain of big-screen theaters in cities and shopping centers—and that will take big money. And throughout its 22-year history, "Imax has always lived off the deposit check from its next deal," says CEO Fred Klinkhammer, who is now searching for an equity partner. A public stock offering is also being considered.

CHALLENGERS. Imax also needs to cut the cost of its often unwieldy technology. Fujitsu spent $1.2 million for each minute of supercomputer graphics it created for *Echoes of the Sun*. The Stones movie was far cheaper, costing $10 million, but filming was "complicated and time-consuming," says Cohl, because Imax cameras hold only eight minutes of film.

Even if Imax gets the money, it will have to compete with several U. S. companies. The biggest challenger is Iwerks Entertainment Inc., of Burbank, Calif., launched in 1988 by two former Walt Disney Co. executives. Financial backing comes from a group of venture capitalists, including Scott G. McNealy, chairman of Sun Microsystems Inc. Iwerks, a private company with revenues of $15 million to $20 million, has already built around 40 commercial movie theaters.

Iwerks President Stanley B. Kinsey predicts that the company's cheaper technology will ultimately prevail. "Imax got the first rocket into space" with *At the Max*, Kinsey says, "but we're going to get to the moon first." Iwerks has signed on with Hollywood superagent Michael Ovitz, who is trying to get movie studios to make a full-length film that will use Iwerks technology, says Kinsey.

Who will win the big-screen race? Imax is ahead right now with *At the Max*, but Iwerks may have Hollywood behind it. In the end, it probably won't matter to the moviegoing public. Six-story screens showing supersharp movies are already generating excitement. And audience involvement in the oversize fantasy may be high enough to pull ever-reclusive coach potatoes out of their living rooms.

By William C. Symonds in Toronto, with Ronald Grover in Los Angeles and Neil Gross in Tokyo

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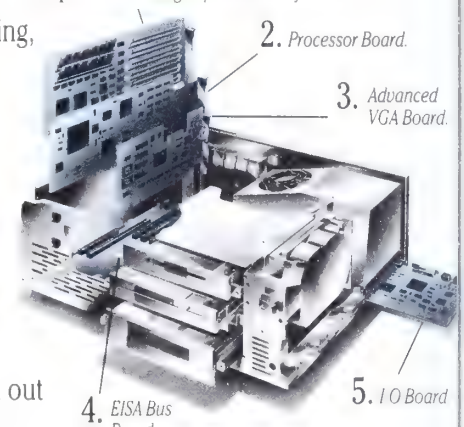

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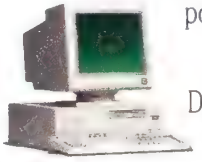

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MANUFACTURING

'THIS IS WHAT THE U.S. MUST DO TO STAY COMPETITIVE'

Make factories 'agile,' link them by computer—and collaborate

Throughout last summer, 15 executives from leading U. S. companies spent two or three days a week doing what they believe must be done by American industry as a whole: cooperating on a strategic vision for manufacturing in the 21st century. "If we don't learn how to work together better, we could end up working for the Japanese," says Roger N. Nagel, operations director of Lehigh University's Iacocca Institute, which served as the hub of the collaboration.

On Dec. 12, Nagel will unwrap the results of the summer camp: a two-volume report called *21st Century Manufacturing Enterprise Strategy.* It lays out a daring blueprint that Nagel insists could enable U. S. industry to match—and surpass—the ambitious programs under way in Japan and Europe to develop tomorrow's factories. Because the industrialized world is working to reinvent manufacturing, says Nagel, "we have a unique opportunity, now, to restore American manufacturing to world leadership. But it will only get done if we all sit down together." Adds Gino J. Giocondi, vice-president for productivity at Chrysler Corp. and a member of the team that thrashed out the Lehigh report: "If we could wave a magic wand" and implement these proposals, "there's no question the U. S. could regain manufacturing preeminence in 15 years."

BIG GULP. At first blush, parts of the plan may seem farfetched. It envisions nimble carmakers that will take an order, then build and deliver custom-made, defect-free cars in only three days. Assembled from modular components, the cars could later be upgraded easily by consumers eager to drive the latest technological marvels—but too parsimonious to buy a new car. "You could see the Detroit guys kind of gulp at the practical realities of that," recalls Wyckham Seelig, director of manufacturing planning at American Telephone & Telegraph Co. and also a member of the Lehigh team.

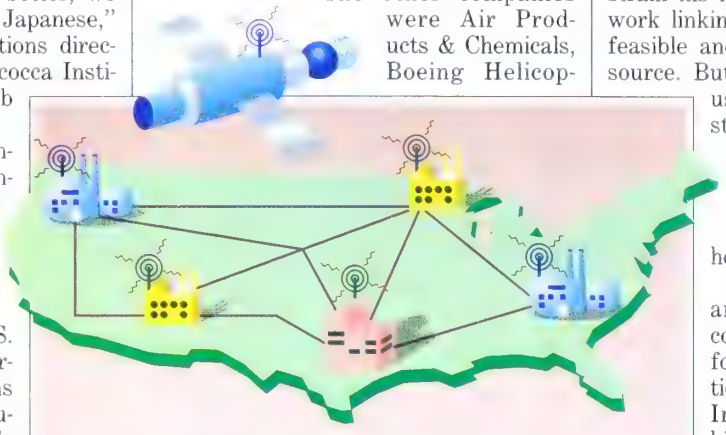
The other companies were Air Products & Chemicals, Boeing Helicopters, FMC, General Electric, General Motors, IBM, Kingsbury Machine Tool, Motorola, Texas Instruments, TRW, and Westinghouse Electric.

The study outlines the concept of a three-day car in detail because a similar scheme has been evolving in Japan since 1987. It's part of projects being coordinated by the Japan Machinery Federation and Waseda University. Known in the U. S. as Manufacturing 21, the Japanese program is supported by 200 companies. In fact, according to some observers, the Ministry of International Trade & Industry hatched its grandiose Intelligent Manufacturing System project (page 96) to avoid being outclassed.

JACK BE NIMBLE. Seelig concedes that some provisions of the Lehigh study strain his imagination. A computer network linking every American factory is feasible and would be a formidable resource. But the scenario also envisions using the network to form instant on-line partnerships, or "virtual ventures," to go after fast-moving markets. In the land of rugged individualism, "that's a stretch," he says.

But if Lehigh's predictions are right, virtual ventures could be essential. The report forecasts a worldwide transition to "agile" manufacturing. In this environment, any high-tech company still wedded to mass production will lose out to nimble competitors who use reconfigurable factories and computer-integrated systems to turn out customized products in a dizzying range of choices.

The strategic plan will be handed out to managers attending an Agile Manufacturing Conference in Lake Buena Vista, Fla. Many of these managers served as advisers representing the 70-odd companies that helped refine pieces of the strategy. Their next challenge will be to sell it to top management and enlist a senior executive from each company for a lobbying effort early next year. Then, Nagel and his partner on the project, Richard K. Dove, a California entrepreneur, plan to descend on Washington with a dozen top executives. "We want to march on Congress," says Dove, "and tell them that this is what the U. S. must do to stay competitive and maintain



A BLUEPRINT FOR BETTER MANUFACTURING

With "agile" manufacturing, cars might be made to order in three days and products might be designed in a modular fashion, so they can be constantly updated by replacing major components. Here are some ways to achieve this:

NATIONWIDE FACTORY NETWORK

- A huge base of diversified suppliers would be linked to a computer network, possibly via satellite
- The network would facilitate concurrent engineering—developing a product as a collaboration of the design, production, marketing, purchasing, and service departments—either within the same company or among corporate partners
- The network would also foster collaboration on "virtual ventures" created for one project, then disbanded

PLUG-IN SYSTEMS

- Tomorrow's factories could be quickly reconfigured to exploit unanticipated opportunities. They would use standardized machines, software, and processes that could simply be plugged into the manufacturing system

INVESTMENT INCENTIVES

- A capital-gains tax indexed to the length of time an investment is held would stimulate spending on manufacturing gear needed for state-of-the-art production

DATA: LEHIGH UNIVERSITY, BW

Medical studies reveal...

The earlier you use Rogaine, the better your chances of growing hair.

"My hair's completely filled in. *It started growing in under 2 months It was amazing! Early treatment...it works!" —Jim Wilets, 30*

Rogaine is the only product ever proven to grow hair. And studies show that using it at the first signs of hair loss gives you the best chance that it will grow hair for you.

What are the early warning signs of losing hair?

Everyone loses a little hair. Fifty to 80 hairs a day is normal. If you're losing more than 100 hairs a day without normal replacement, the first sign will often be thinning of the "crown" at the top of your scalp. See your doctor when you first notice it, because this small bald spot can grow larger over time.

"I may not have grown any hair after 6 months, but most of my hair's stopped falling out. I'm glad I got to the doctor fast." —Luis Silva, 20

Two million men worldwide have tried *Rogaine*. In yearlong clinical tests conducted by dermatologists at 27 medical centers nationwide, virtually half (48%) of the men who tried *Rogaine* saw at least moderate hair regrowth. Thirty-six percent had minimal regrowth and only 16% had no regrowth.

Doctors also found that it usually takes 4 months or more before you can begin to evaluate your use of *Rogaine*. Side effects were minimal: only 5% of the men tested had itching of the scalp.

"The first time I saw hair growing was at about 8 months. I hadn't lost much...*but I'm not taking any chances." —Tony Vila*

Will *Rogaine* work for you?

Only a dermatologist or another doctor who treats hair loss can tell you, so see one soon. The sooner you get your prescription for *Rogaine* (which is now available in an economical 3-pack), the sooner you could be growing hair.

For more information, a list of doctors in your area who can help you, and a certificate worth $10 as an incentive to visit your doctor, call the toll-free number below:

Send in the coupon or call 1 800 753-5559 ext 679 for your $10 certificate. Soon.

Fill this in now. Then, start to fill in your hair loss.

Mr. Keith Barton, The Upjohn Company
PO Box 9040, Opa Locka, Florida 33054-9944

Dear Mr. Barton:

Please send me a free brochure, full of information on how to treat my hair loss with *Rogaine*. And just to make sure I don't forget to go to my doctor about my hair loss, please send me a list of doctors who can help me and a certificate worth $10 as an incentive to see my doctor. Thanks.

Name_____

Address_____

City/State/Zip_____

Phone_____ Age_____

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For a summmary of product information, see adjoining page.

Rogaine®

TOPICAL SOLUTION minoxidil 2%

The only product proven to grow hair.

Rogaine
TOPICAL SOLUTION minoxidil 2%

The only product ever proven to grow hair.

What is ROGAINE?

ROGAINE [illegible] developed and made by The Upjohn Company is a standardized topical (for use only on the skin) preparation containing minoxidil. It is the only product proven effective for the long-term treatment of male-pattern baldness of the crown and in females for diffuse hair loss or thinning of the frontal areas of the scalp.

ROGAINE is the only topical solution of minoxidil. Minoxidil in tablet form has been used since 1980 to lower blood pressure. The use of *minoxidil tablets* is limited to treatment of patients with severe high blood pressure. When a high enough dose in tablet form is used to lower blood pressure, certain effects that merit your attention may occur. These effects appear to be dose related.

Persons who use ROGAINE Topical Solution have a low level of absorption of minoxidil, much lower than that of persons being treated with *minoxidil tablets* for high blood pressure. Therefore, the likelihood that a person using ROGAINE Topical Solution will develop the effects associated with *minoxidil tablets* is very small. In fact, none of these effects have been directly attributed to ROGAINE in clinical studies.

How soon can I expect results from using ROGAINE?

Studies have shown that the response to treatment with ROGAINE may vary widely.

Some patients receiving ROGAINE may see faster results than others; others may respond with a slower rate of hair growth. You should not expect visible growth in less than 4 months.

If I respond to ROGAINE, what will the hair look like?

If you have very little hair and respond to treatment, your first hair growth may be soft, downy, colorless hair that is barely visible. After further treatment the new hair should be the same color and thickness as the other hair on your scalp. If you start with substantial hair, the new hair should be of the same color and thickness as the rest of your hair.

How long do I need to use ROGAINE?

ROGAINE is a treatment, not a cure. If you respond to treatment, you will need to continue using ROGAINE to maintain or increase hair growth. If you do not begin to show a response to treatment with ROGAINE after a reasonable period of time (at least 4 months or more), your doctor may advise you to discontinue using ROGAINE.

What happens if I stop using ROGAINE? Will I keep the new hair?

If you stop using ROGAINE, you will probably shed the new hair within a few months after stopping treatment.

What is the dosage of ROGAINE?

You should apply a 1-mL dose of ROGAINE two times a day, once in the morning and once at night, before bedtime. Each bottle should last about 30 days (1 month). The applicators in each package of ROGAINE are designed to let you apply the correct amount of ROGAINE with each application. *Please refer to the Instructions for Use.*

What if I miss a dose or forget to use ROGAINE?

If you miss one or two daily applications of ROGAINE, you should restart your twice-daily application and return to your usual schedule. You should not attempt to make up for missed applications.

Can I use ROGAINE more than twice a day? Will it work faster?

No. Studies by The Upjohn Company have been carefully conducted to determine the correct amount of ROGAINE to use to obtain the most satisfactory results. More frequent applications or use of larger doses (more than 1 mL twice a day) have not been shown to speed up the process of hair growth and may increase the possibility of side effects.

What are the most common side effects reported in clinical studies with ROGAINE?

Studies of patients using ROGAINE have shown that the most common adverse effects directly attributable to ROGAINE Topical Solution were itching and other skin irritations of the treated area of the scalp. About 7% of patients had these complaints.

Other side effects, including light-headedness, dizziness, and headaches, were reported by patients using ROGAINE or placebo (a similar solution without the active medication).

What are some of the side effects people have reported?

The frequency of side effects listed below was similar, except for dermatologic reactions, in the groups using ROGAINE and placebo. *Respiratory*: bronchitis, upper respiratory infection, sinusitis. *Dermatologic*: irritant or allergic contact dermatitis, eczema, hypertrichosis, local erythema, pruritus, dry skin/scalp flaking, exacerbation of hair loss, alopecia. *Gastrointestinal*: diarrhea, nausea, vomiting. *Neurologic*: headache, dizziness, faintness, light-headedness. *Musculoskeletal*: fractures, back pain, tendinitis. *Cardiovascular*: edema, chest pain, blood pressure increases/decreases, palpitation, pulse rate increases/decreases. *Allergic*: nonspecific allergic reactions, hives, allergic rhinitis, facial swelling, sensitivity. *Special Senses*: conjunctivitis, ear infections, vertigo, visual disturbances including decreased visual acuity. *Metabolic-Nutritional*: edema, weight gain. *Urinary Tract*: urinary tract infections, renal calculi, urethritis. *Genital Tract*: prostatitis, epididymitis, sexual dysfunction. *Psychiatric*: anxiety, depression, fatigue. *Hematologic*: lymphadenopathy, thrombocytopenia. *Endocrinologic*.

Individuals who are hypersensitive to minoxidil, propylene glycol, or ethanol must not use ROGAINE.

ROGAINE Topical Solution contains alcohol, which could cause burning or irritation of the eyes, mucous membranes, or sensitive skin areas. If ROGAINE accidentally gets into these areas, bathe the area with large amounts of cool tap water. Contact your doctor if irritation persists.

What are the possible side effects that could affect the heart and circulation when using ROGAINE?

Although serious side effects have not been attributed to ROGAINE in clinical studies, there is a possibility that they could occur because the active ingredient in ROGAINE Topical Solution is the same as in *minoxidil tablets*.

Minoxidil tablets are used to treat high blood pressure. *Minoxidil tablets* lower blood pressure by relaxing the arteries, an effect called vasodilation. Vasodilation leads to retention of fluid and increased heart rate. The following effects have occurred in some patients taking *minoxidil tablets* for high blood pressure.

Increased heart rate. Some patients have reported – a resting heart rate increased by more than 20 beats per minute; rapid weight gain of more than 5 pounds or swelling (edema) of the face, hands, ankles, or stomach area; difficulty in breathing, especially when lying down, a result of an increase in body fluids or fluid around the heart; worsening of, or new onset of, angina pectoris.

When ROGAINE Topical Solution is used on normal skin, very little minoxidil is absorbed, and the possible effects attributed to minoxidil tablets are not expected with the use of ROGAINE. If, however, you experience any of the possible side effects listed, discontinue use of ROGAINE and consult your doctor. Presumably, such effects would be most likely if greater absorption occurred, e.g., because ROGAINE was used on damaged or inflamed skin or in greater than recommended amounts.

In animal studies, minoxidil, in doses higher than would be obtained from topical use in people, has caused important heart-structure damage. This kind of damage has not been seen in humans given *minoxidil tablets* for high blood pressure at effective doses.

What factors may increase the risk of serious side effects with ROGAINE?

Individuals with known or suspected underlying coronary artery disease or the presence of, or predisposition to, heart failure would be at particular risk if systemic effects (that is, increased heart rate or fluid retention) of minoxidil were to occur. Physicians, and patients with these kinds of underlying diseases, should be conscious of the potential risk of treatment, if they choose to use ROGAINE.

ROGAINE should be applied only to the scalp and should not be used on other parts of the body because absorption of minoxidil may be increased and the risk of side effects may become greater. You should not use ROGAINE if your scalp becomes irritated or is sunburned, and you should not use it along with other topical treatment medication on your scalp.

Can individuals with high blood pressure use ROGAINE?

Individuals with hypertension, including those under treatment with antihypertensive agents, can use ROGAINE but should be monitored closely by their doctor. Patients taking guanethidine for high blood pressure should not use ROGAINE.

Should any precautions be followed?

Individuals using ROGAINE should be monitored by their physician 1 month after starting ROGAINE and at least every 6 months thereafter. Discontinue ROGAINE if systemic effects occur.

Do not use it in conjunction with other topical agents such as corticosteroids, retinoids, petrolatum, or agents that enhance percutaneous absorption. ROGAINE is for topical use only. Each milliliter contains 20 mg minoxidil, and accidental ingestion could cause adverse systemic effects.

No carcinogenicity was found with topical application. ROGAINE should not be used by pregnant women or by nursing mothers. The effects on labor and delivery are not known. Efficacy in postmenopausal women has not been studied.

Pediatric use: Safety and effectiveness have not been established under age 18.

Caution: Federal law prohibits dispensing without a prescription. You must see a doctor to receive a prescription.

Upjohn DERMATOLOGY DIVISION

The Upjohn Company
Kalamazoo, MI 49001 USA

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our standard of living. And that industry is committed to it, even if we don't get any help from the government."

That message, says a senior Senate staffer, would stand a good chance of gaining real attention on Capitol Hill. "Usually we hear: 'My industry is going down the tubes, and you gotta do something about it.'" But the tone of the Lehigh report is different, he notes. "What comes out of this study is that industry has to take the lead"—including plunking down its own cash before asking for taxpayer funds. The main role envisioned for Washington concerns infrastructure issues that affect all industries. For example, the Lehigh report urges lifting regulatory barriers to cooperative research and development. As a result, says the Senate staffer, the strategy will be far less distasteful to anti-industrial-policy ideologues.

That's by design. "We knew we had to back away from anything that smacked of industry-specific recommendations to

> These proposals 'won't break the bank.' American industry could foot the bill 'with practically zero new funds'

get the broad consensus that we want to take to Washington," says Dove. Besides, the study was commissioned by the Defense Dept., which wanted a conceptual roadmap to guide future investments in its Manufacturing Technology program. ManTech's budget has been growing steadily, hitting $280 million in fiscal 1992. But the whole program is now coming under skeptical scrutiny, despite studies showing that ManTech returns $10 in savings for every $1 spent.

In the past, ManTech's focus has been on making existing shop-floor operations more efficient. But given the changing geopolitical scene and pressures on the Defense budget, Charles H. Kimzey, who heads the ManTech program from the Office of the Assistant Secretary of Defense for Production & Logistics, figured it was time to take a fresh look: Rather than upgrading today's methods, maybe Defense could get even bigger returns by plowing seed funds into fundamentally new technologies. Once you start exploring those horizons, he notes, "the distinction between military and commercial technology dissolves."

And following the Lehigh proposals won't break the bank, insists Richard L. Engwall, manager of advanced manufacturing initiatives at Westinghouse Elec-

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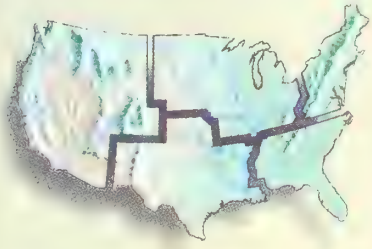

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NEW AUDI 100 HAS GERMAN MOTORING PRESS DOING A 180°.

In a surprise turnaround, three of Germany's top automotive journals rated the all new Audi 100 ahead of Mercedes and BMW. As Andres Borchman, editor of AUTO BILD, said, "The new Audi 100 is no longer number three among the distinguished German marques, but, as the test proves, number one."

Even though the Audi outperformed the $42,950 Mercedes and the $35,625 BMW, the front-wheel drive Audi 100S is priced at $29,900.* And features a V-6 engine, ABS brakes, driver's side airbag, fully galvanized body, and a 3-year or 50,000-mile limited warranty with no charge for scheduled maintenance.**

—Karl Treutler, Munich

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tronic Systems Group. Between the public and private sectors, "we're spending an awful lot of money—but nothing's coordinated or organized," he complains. If industry were free to pool resources across company boundaries, America might foot the bill for practically zero new funds. Congress will like that.

By Otis Port in New York, with John Carey in Washington and bureau reports

A JAPAN EAGER TO POOL KNOWHOW

Two years ago, Japan's government sought the help of American industry for an ambitious research program. The goal was to spur a quantum leap in production technology by pooling the knowhow of the world's top manufacturers. To sweeten the deal, Japan proposed to fund 80% of the estimated $1 billion cost.

But the overtures to U. S. companies infuriated the Commerce Dept. Fretting that the Intelligent Manufacturing System (IMS) proposal was a ploy to soak up American software expertise, Commerce demanded a halt so it could help plan the effort. That outraged American executives eager to learn about Japanese technology.

PLATITUDES. Now, IMS is finally limping down the runway. This month, the U. S., Canada, Australia, Europe, and Japan will meet in Switzerland to draw up guidelines for a two-year study. The real IMS project will begin after that.

The original idea has been muddied by a mishmash of multilateral proposals and communiqués, and its scope has shrunk—with no assurance that Japan will approve more than the $6 million slated for next year. At the Ministry of International Trade & Industry, officials spout platitudes about Japan's contributions to a new "technoglobalism." But when asked which U. S. companies will participate, IMS point man Naoki Motoshima replies: "I was hoping you would tell me."

Even if IMS never lives up to its billing, it has provoked thoughtful responses in Europe and the U. S., such as the new study from Lehigh University (page 92). The challenges in the next century are "too big for any one country," says Richard K. Dove, a California entrepreneur who helped guide the Lehigh study. That's why IMS will need a clearer commitment to global cooperation if it is to deliver tomorrow's technology to the factory floor.

By Neil Gross in Tokyo

PRESERVATION
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Planning on restoring a house, saving a landmark, reviving your neighborhood?

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Washington, D.C. 20036

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For instance, stainless steel's endless applications in food processing equipment – up to and including the kitchen sink. Not to mention its widespread use in architecture, aerospace and under-sea technology.

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A NEW WAY TO 'SEE' UNDER THE SEA

Taking measurements in the deep sea is increasingly important for climate research, pollution monitoring, and a better understanding of the oceans. But voyages to obtain such data are time-consuming and costly. Now, researchers at Battelle Marine Sciences Laboratory in Sequim, Wash., and Ocean Sensors Inc. in San Diego have developed a relatively inexpensive "smart" seafaring sensor.

Dropped in the water, the sensor will descend to the ocean floor, down to 19,000 feet. Its microprocessor can be programmed to collect data such as depth, current, and temperature for up to two years. At a designated time, the sensor will return to the surface to send its data back to land via satellite. Armed with the ability to seek out specific chemicals, the sensor could become a watchdog, sending an alert when it detects pollutants that exceed certain levels. The researchers plan to test their first prototype next spring.

USING SOUND TO PINPOINT LEAKS IN BREAST IMPLANTS

Some 2 million women in the U.S. have breast implants, most of them silicone. One of the problems, however, is that the implants can tear. Ordinary mammography often fails to detect even large leaks because they may be obscured by the opaque implant. Now, radiologists at the University of Pittsburgh's school of medicine have found that ultrasound can be more effective than X-rays in finding such leaks.

On a sonogram, the silicone inside the implant appears black because sound waves are bouncing off a homogeneous material. But silicone that has leaked reacts with neighboring tissue to form tiny bubbles, which show up as a characteristic pattern of white spots. "It looks like snow," says Dr. Kathleen Harris, who discovered the process and is director of breast imaging at University of Pittsburgh's Magee-Womens Hospital. Leaky implants are usually surgically replaced, at which time surgeons remove errant bits of silicone.

'HELLO? ROBOT X2D6? GOT A SATELLITE IN TROUBLE....'

When space equipment fails, astronauts sometimes have to be sent on expensive and dangerous repair missions. At Britain's Culham Laboratory, scientists are laying the groundwork for an alternative: remote-controlled space robots, which someday might maintain space equipment. One of the technical limits to be overcome, however, is the five-second time delay in sending instructions from earth to the robot via satellite.

With funding from the European Space Agency, the Culham scientists have developed new computer-graphics software that allows ground controllers to overcome this time lag by anticipating the robot's next move. Project engineer Mark A. Allington says the team has built a prototype workstation with simulated communications time delays. The software projects two images of the robot—the actual one and the one predicted after the time delay—onto the computer screen. Using a joystick, the ground operator can direct the robot to perform primitive servicing tasks such as unscrewing fittings. Space robots are years away, but Allington says this software may be applied to other jobs for remote-controlled robots such as underwater repairs to offshore oil rigs or work in highly radioactive areas in nuclear plants.

STARVE A WORM, SAVE A PLANT

Genetic engineers had hoped to revolutionize agriculture by creating crops that fight off insects and disease. But the most common strategy, slipping in genes that cause the plants to make a natural pesticide, is turning out to be flawed. The problem: Insects quickly develop resistance to the pesticide. So researchers at North Carolina State University in Raleigh have come up with an ingenious scheme against one common pest—tiny worms called nematodes, which damage up to $100 billion a year of such crops as potatoes, soybeans, and tobacco.

According to researchers, when the worms burrow into the roots to feed, they trigger a genetic change in the plants. Some root cells become greatly enlarged, serving as giant feeding sites. Normally, each worm lives for about 25 to 30 days, during which the females lay hundreds of eggs. NCSU's Mark A. Conkling and Charles H. Opperman decided to attack the feeding sites by inserting into the plant a genetic package containing a cell-killing gene. This is attached to a genetic switch that turns on only when a worm enters the cell. Once the feeding cells are dead, the worm quickly starves to death. This same strategy, Conkling says, may also work against many plant viruses and fungi.

NOW, THE DEAF CAN LISTEN— WITH THEIR FINGERS

Today, many blind people use their fingers to read. Tomorrow, deaf people may do the same to hear. That's because Australian scientists, led by Robert Cowen at the University of Melbourne, have developed a Walkman-size gadget dubbed the Tickle Talker.

Its microphone listens to speech, and a digital-signal processing chip sorts out sounds, particularly those that are hard to distinguish by lip-reading. Each sound triggers an electrical signal that is sent to a specific spot on ringlike bands worn on the fingers of one hand. For example, "s" and "z" sounds are felt as a tickling sensation on the outside of the little finger.

After a couple of weeks of training, one severely deaf lip-reading adult scored 100% in word- and sentence-comprehension tests, up from 60% and 75%, respectively, with just a hearing aid. Another adult, who is profoundly deaf—a hearing aid is of no benefit—nearly doubled his scores from levels of 30% to 50% for words, sentences, and consonant sounds.

M. E. COHEN

MORE CARDS IN THE DECK

As nonbanks rush in, banks may have to cut rates or bow out

The last barriers protecting the once formidable credit-card oligopoly are crumbling, and the invaders are streaming through the gates.

On Dec. 2, Visa USA Inc., a consortium owned by banks, dropped its long-standing effort to prevent financial institutions owned by nonbanks from issuing Visa cards. Visa's move, coming in the wake of a political storm over high credit-card rates and lax competition among card issuers, will accelerate the efforts of large consumer-products companies to get into the lucrative credit-card business. AT&T, General Motors, General Electric, Ford Motor, Prudential Insurance, and Fidelity Investments have already launched card operations.

The eventual result is likely to be a brutal shakeout. Banks, which have been relying on hefty credit-card profits to offset loan losses, will probably be the losers. "It will be harder for big banks to compete, and nonbanks will become major players in the Visa and MasterCard system," says Spencer Nilson, publisher of *The Nilson Report*. MasterCard International Inc., the other card consortium, had earlier relaxed its rules barring nonbank members.

POWERFUL WEAPON. Although the Visa action is important, the major factor now eroding banks' domination of the credit-card business is growing awareness among consumers of the lofty interest rates card companies charge on outstanding balances. Those interest rates give interlopers a powerful weapon to pick up market share in a hurry. "There is going to be a major increase in competition among bank cards. Now there is a lever that can be pulled—interest rates," says Kenneth L. Chenault, president of American Express Co.'s U. S. consumer card group.

The most dramatic example is American Telephone & Telegraph Co., which picked up 12 million customers in less than two years by eliminating the annual fee and charging a slightly lower rate than most big bank issuers (page 104). A survey of 30 issuers by RAM Research in Frederick, Md., from Dec. 31, 1990, to June 30, 1991, found that those banks charging above 18% lost 5% of their active accounts, while those charging rates under 16.5% gained 10%. "That's the first time we've seen that," says Robert B. McKinley, publisher of *CardTrack*, a newsletter from RAM Research that lists no-fee and low-interest-rate card issuers. "Callers used to ask: 'Where can I get a free card?' Now, 3 to 1, they're asking: 'Where can I get a lower rate?' "

For years, consumers were remarkably indifferent to credit-card pricing. While they were aware of annual fees, few paid much attention to interest charges on outstanding balances. Most bank issuers charge 18% and more, even though the prime rate has fallen from 15% in 1982 to its current 7.5%.

Consumers' rate consciousness has been raised by the gradual phaseout of tax deductions for credit-card interest expenses. But what really brought the issue home to the public was the brouhaha in Washington over credit-card rates. On Nov. 12, President Bush tried to demonstrate his concern for the faltering economy by asking banks to lower credit-card interest rates. Smelling a populist issue, the Senate passed a measure to cap credit-card interest rates the next day. Bank lobbyists squelched the bill after arguing that the 14% cap would force banks to withdraw credit cards from 60 million Americans with less-than-stellar credit histories. But credit-card rates have now emerged as a grassroots issue. "The level of criticism and competition helps. Yet it is consumers that will drive rates down by voting with their cards," says McKinley.

NO PUSHOVERS. Aware that nonbank interlopers could provoke price competition, Visa and MasterCard for years tried to limit their membership to banks. MasterCard, which was losing share to Visa, relaxed its rules last year, but the more powerful Visa held fast. AT&T mounted a challenge in March, 1990, by issuing MasterCard and Visa cards through an entity that owns Universal Bank, a small Georgia institution that is a Visa and MasterCard member. Banks and regulators tried to stop AT&T, but to no avail.

Visa's recent move to open the doors to nonbanks was clearly prompted by pressure from Washington. Next spring, the House banking subcommittee on consumer affairs and coinage will take

p a bill that
ould order a study
f rates and competition among credit-
ard issuers. If the market is deemed
ncompetitive, the measure would au-
horize a floating cap—which today
ould be set at 14.5%—on card rates.

The nonbanks that are lining up to
ake on the banks are not pushovers.
ew of them market credit cards to the
eneral public, but many already have
xtensive card operations and potent
ame recognition.

Take Ford Motor Co. In 1989, it bought Associates Corp. of North America, a Dallas-based financial company. Associates now offers a Visa and MasterCard emblazoned with the Ford logo. With only 3 million cardholders, Associates is still a small player. But Ford has bigger ambitions. It is starting to tap the 20 million Ford customers, shareholders, and employees. In June, it sent out 500,000 credit-card solicitations to people who bought a Ford car or truck in the past three years—and signed up more people than anticipated. "We are trying to make the [Ford] card as competitive as we can," says Kenneth Whipple, president of Ford's Financial Services group.

General Motors Corp. is another likely contender. Although the auto maker denies any intention of getting into the consumer credit-card business, it recently replaced employees' American Express Cards with a GM MasterCard and hired a senior credit-card marketer. Observers speculate that it will announce its own Visa and MasterCard in early 1992 and use it to boost customer loyalty. The card might accumulate credits toward the purchase of a new GM vehicle, as miles accumulate in a frequent-flier program.

FIGHTING BACK. Fidelity Investments has already attracted 6.2 million customers with its MasterCard and has launched a marketing campaign for a no-fee gold card. "It's part of our push to be a full-service financial services firm," says a spokeswoman.

Banks are fighting back. Citicorp and MasterCard have set up special units to help them retain cardholders who try to switch to nonbank issuers. "AT&T does reach out and touch everybody," says Thomas C. Lynch, who runs Chase Manhattan Corp.'s credit-card operation, the No. 2 card issuer.

Increasingly, banks are coming to realize that they have no choice but to lower interest rates. Sometimes the cutting is covert. Customers these days are often finding that they are able to bargain for better rates with issuers, especially when they threaten to cancel their cards.

Other banks have developed tiering or market segmentation strategies. The bigger banks, which have been resisting

SOME POWERHOUSES PLOWING INTO PLASTIC...

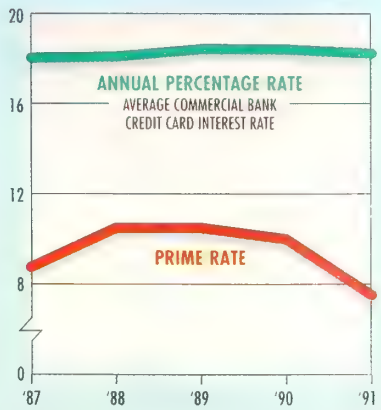
FORD Is marketing Ford Visa and MasterCard to 20 million Ford customers, employees and, shareholders. Might buy bank-card portfolios

GENERAL MOTORS Expected to roll out ad campaign for its own MasterCard next year. Replaced American Express cards used by its employees with own MasterCard

GENERAL ELECTRIC GE Capital issues credit cards through Monogram Bank USA, an Ohio bank, and is likely to expand operation. Also major processor for retail credit cards

FIDELITY Launching new marketing campaign for its MasterCard to its 6.2 million customers

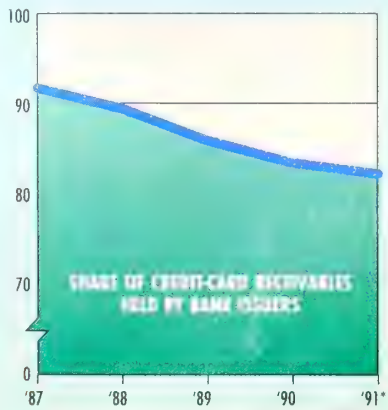
...HAVE LOTS OF RUNNING ROOM ON RATES...



▲ PERCENT

DATA: BW SURVEY, RAM RESEARCH

...AND COULD WREST MORE BUSINESS FROM BANKS



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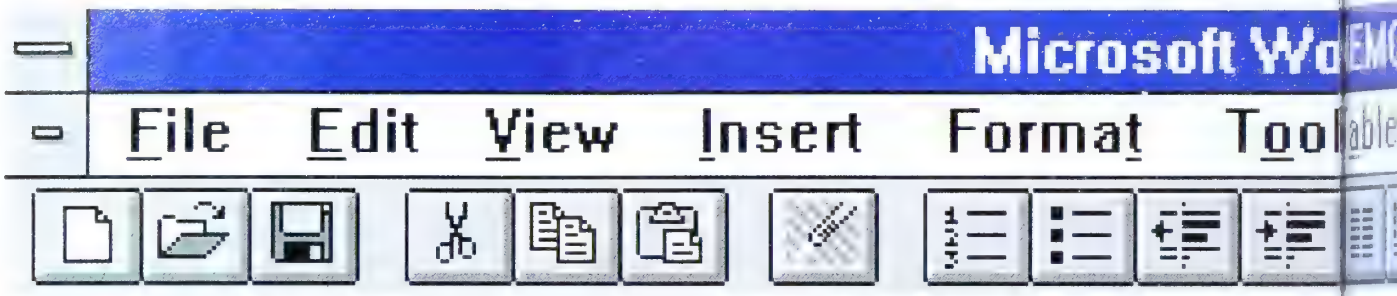

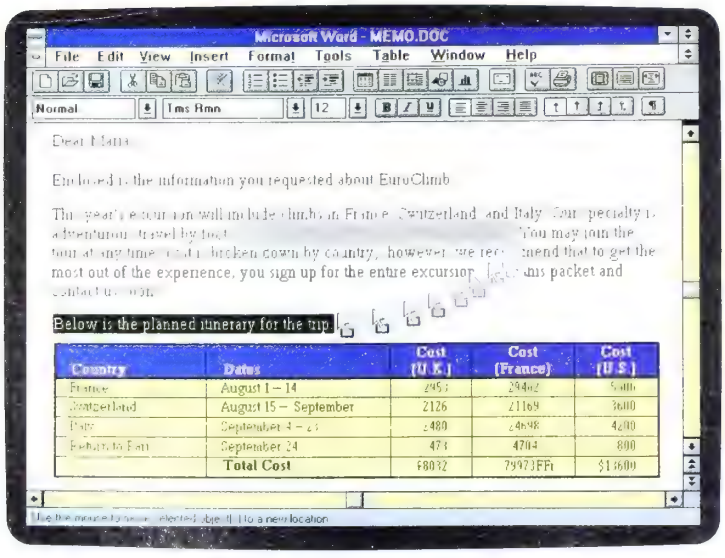

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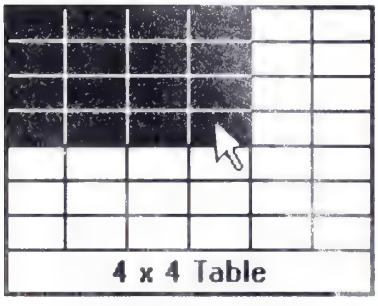
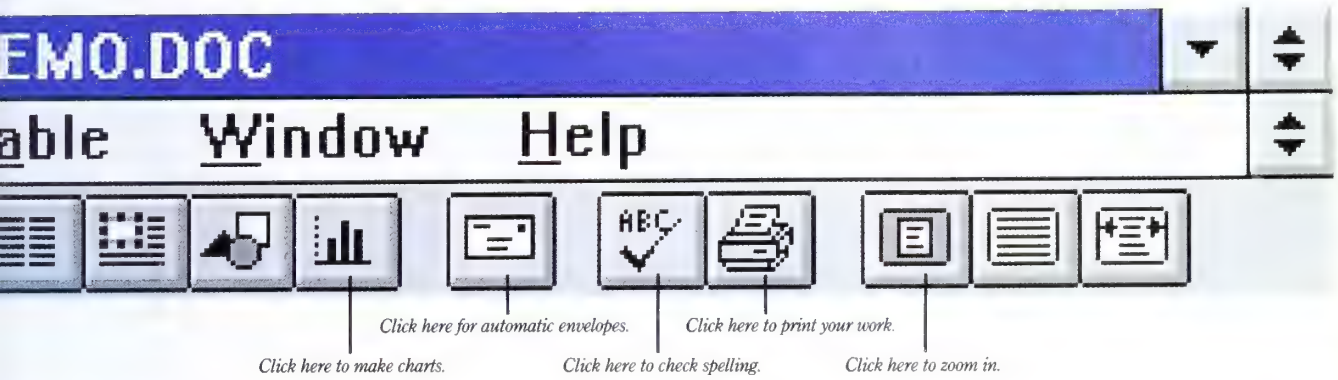


All it takes is one click on the Toolbar and presto, instant tables.

Click this Toolbar button and get instant bullets.

The mouse makes everyday tasks as easy as click, click, click.

rd processor second nature.



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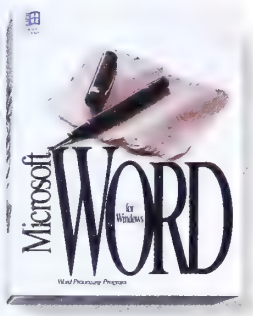

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across-the-board rate cuts because of their dependence on credit-card earnings, are offering reduced rates to their better customers. First Chicago Corp., the fourth-largest issuer, is cutting rates charged customers with good credit histories to only 6.9% over prime, vs. 9.9 % over prime for most of its clientele. Preferred new customers of First Chicago's Visa card are getting a 15.6% rate with no annual fee.

A few banks are cutting rates to all comers. On Nov. 5, Banc One Corp., the 14th largest issuer, announced a new no-frills card with a 13.9% annual rate and a $25 annual fee.

Many observers feel that growing price competition will provoke a severe shakeout among the weaker players, chiefly banks. "Profits in the industry are going down," says Scott Marks, chairman of FCC National Bank of Wilmington (Del.), which issues First Chicago's Visa cards. Many medium-sized banks may sell off their credit-card businesses to such ambitious outsiders as Ford.

Look at what's happening in New England. Three of the region's largest banks—Bank of Boston, Shawmut National, and the former Bank of New England—sold their credit-card portfolios in the past two years to raise cash. A fourth, State Street Boston, bailed out after deciding it couldn't compete. Fleet/Norstar Financial Group is the only major bank in the region with a sizable credit-card operation.

The shakeout is bound to be very painful to the banking industry, but it will be a boon to consumers. As long as consumers keep voting with their cards, Congress should just sit back and watch credit-card interest rates fall.

By Leah Nathans Spiro with Suzanne Woolley in New York, David Woodruff in Detroit, David Greising in Chicago, and bureau reports

HOW AT&T SKIMMED THE CREAM OFF THE CREDIT-CARD MARKET

Paul G. Kahn, chief executive officer of AT&T's Universal Card division, used to be a ranking member of the club. He spent 12 years working for the credit-card operations of major bank issuers of plastic, from First Chicago Corp. to Wells Fargo & Co. Each year, he would receive 50 to 75 Christmas cards from friends at other banks. But since Kahn defected to American Telephone & Telegraph Co. in May, 1989, not one of his banking colleagues has sent him holiday greetings. How does the snub make him feel? Without missing a beat, Kahn says: "Successful."

Ever since AT&T launched its Universal card in March, 1990, the comfortable world of credit cards hasn't been the same. While the card has yet to turn a profit, AT&T in less than two years has put more than 11 million of them in circulation, making it the third-largest issuer after Citicorp and Chase Manhattan Corp.

KAHN: "EVERYONE THOUGHT IT WAS A SATURATED MARKET"

AT&T's emergence as a top credit-card player is a testament to the clout of the AT&T name, especially compared with most bank issuers. "There's no name in consumer services that compares," says Kahn.

'BETTER MOUSETRAP.' But AT&T's success also reflects plain old price competition. The Universal card was initially offered with no annual fee for life. It also has a variable interest rate of 6.9% over the prime rate, which made its rate slightly lower than what the big banks were charging. In its first year, it scooped up 8.5 million cardholders. "Everyone thought it was a saturated market, and we built a better mousetrap," brags Kahn.

AT&T later tacked on an annual $20 fee. But just hours after President Bush on Nov. 12 asked banks to lower their credit-card interest rates, AT&T dropped its rate from 17.4% to 16.4% for charter members instead of waiting until a scheduled January rate adjustment. The move produced a surge of favorable publicity and card applications. "It's like termites," says Kahn. "Our competitors think they have a structure, and all of a sudden, it's eaten out."

AT&T's name recognition and cut-rate prices have allowed it to cherry-pick the best customers from its competitors. Kahn says AT&T turned down 1 out of every 3 or 4 people who applied for a card—about 1 million people from March to December, 1990. The result is a 1.3% rate of charge-offs for deadbeats. It helps, says Kahn, that some cardholders pay their bills promptly out of the misplaced fear that if they don't, their phone might be shut off.

QUICK PAYOFFS. AT&T's higher-quality customer base, Kahn predicts, will eventually allow it to be as profitable as competitors. He estimates that a money-center bank earns 19.8% on its credit-card debt, spends 6% for funds and 5% on operating costs, and loses 5% in charge-offs, for a profit of 3.8%. AT&T pays only 5% for funds because of its higher credit rating and spends 6% on operating costs. But since AT&T loses a scant 1.3% on charge-offs, its return should be comparable, about 4%.

AT&T's strategy has one big flaw. About 65% of its cardholders pay off their balances monthly, with 35% paying interest for revolving credit, says Bruce Brittain, an Atlanta consultant. Profitable banks usually have the reverse ratio. 'They [AT&T] can't make any money until a majority of their portfolio is carrying balances," says Brittain.

Brittain concedes that AT&T's portfolio will probably resemble bank-card portfolios within 18 to 30 months. Kahn predicts that the AT&T card will be as profitable as his competitors' cards by 1995. Few of those competitors are betting against him—which is why Kahn's mailbox may be just as empty this Christmas.

By Leah Nathans Spiro in New York

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WATCH OUT FOR FALLING BULLS

Wall Street's technicians are trumpeting a horrible crash—again

If the typical Wall Streeter were to utter a Yuletide wish, it would probably be this simple plea: "Please, no more November 15ths!" That day's painful, 120-point decline in the Dow Jones industrial average has been followed by three weeks of queasy, nervous trading, with the market often swinging widely in a matter of hours. Investors, it seems, are uncertain if the economy is so seriously weakened that it will send the market thundering down again. Well, the Street's army of chart-gazing technicians also have a simple Christmas wish—a crash helmet.

Technicians are sounding the alarm again. Some of the most widely followed technical gurus, including the *Professional Tape Reader* and *Elliot Wave Theorist* market letters, are issuing dour forecasts of an impending stock market calamity—and they are doing so with the same fervor that accompanied the gloomy proclamations of this summer (BW—Aug. 5). True, they concede that the Nov. 15 setback was nowhere near the Armageddon that many of them had been predicting a few months back. But the day of reckoning, they maintain, is inevitable—though it may be postponed for a few months in the event of election-year "magic and mirrors," says Peter Eliades, editor of the *Stockmarket Cycles* newsletter. "We're very bearish," says Eliades.

SUCKER PUNCH. Unlike their counterparts who track such fundamentals as interest rates and corporate earnings, technicians follow graphs, waves, and formulas that trace such things as trends in prices and volume. And those numbers are giving them little reason to believe that the Nov. 15 decline was a one-day affair, resembling the market's hysteria on Oct. 13, 1989, when the Dow fell 190 points but quickly recovered. Nor are they assuaged by ultralow interest rates, which have left the stock market as the only potential source of substantial returns.

Indeed, technicians maintain that droves of small investors are being suckered into the market by low money-market rates—which, though tiny, will seem appealing once the market's comeuppance has arrived. They argue that equity investors are in pretty much the same position as real estate investors a couple of years ago—and should cash out before it is too late. "It's not generally believed, but we're now in a bear market," asserts Dave Allman, director of research at *Elliot Wave Theorist*.

Some of the more widely followed technical indicators gauge sentiment among both professional and small-fry investors (table). Lately, much of that sentiment has been bullish—too bullish, in the view of some technical mavens. Among the indicators tracked by Stan Weinstein, the editor of *Professional Tape Reader*, is the sentiment of his fellow newsletter editors—which now stands at 47% bullish, which he views as excessively high. By contrast, he notes, just 28% of market-letter writers were bullish in September, 1990, on the eve of the market's rally. Weinstein is also concerned by the lack of breadth in the rallies that preceded the Nov. 15 correction. Although the Dow and the Standard & Poor's 500-stock index hit new highs, only a few stocks reached all-time highs. Observes Weinstein: "Fewer Indians were following the chief up the mountain."

'INTERESTING DAY.' There is a ray of sunshine in even the most gloomy technicians' predictions, however. They maintain that the market is not facing an imminent Custer-style massacre and that investors will have ample opportunity to cash out before it's too late. Take the 40-point surge on Dec. 2. "A very interesting day," says Richard A. Diamond, an independent trader and technician. The Nikkei stock index had fallen 3%, which threatened to set off a chain reaction in New York. And sure enough, the market declined dramatically, to a stomach-churning low of 2864—a 30-point decline in the first hour. But then, the market began to rally—"in a very bullish fashion," Diamond notes approvingly—as bargain hunters waded in and the rout turned into a minor victory.

From the technical standpoint, the Dec. 2 rally was significant—indicating that the market has reached what Weinstein describes as a "short-term bottom." And Diamond feels that the market may rise as high as 3200 in the first few months of 1992. But he expects the market to collapse thereafter—falling by as much as 600 points.

Will it happen? The technicians have been wrong—or at the least, premature—in the past. But if the economic news continues to sour, all but the most stalwart bulls will begin to see that those little chart squiggles may be ominous after all.

By Gary Weiss in New York

INDICATORS TO PLUMB THE MARKET'S DEPTHS

Indicator	Description
TRADING INDEX (TRIN)	The volume of declining stocks vs. the volume of advancing stocks. A ratio over 1.2 is bullish—it means the market is oversold
MEMBER SHORT SALES SPECIALIST SHORT SALES	Short sales by New York Stock Exchange members and specialists. A high number is considered bearish
ODD-LOT SHORT SALES	A gauge of small-investor bearishness—a "dumb money" indicator. A high number is considered bullish
CALL-PUT RATIO	Ratio of options to buy stocks (calls) vs. options to sell stocks (puts). A higher ratio is considered bearish
SECONDARY DISTRIBUTIONS	Number of new stock issues by already-public companies. A high number signals an overheated market
THIRTY-WEEK MOVING AVERAGE	The market's long-term trend. When an index drops beneath its 30-week moving average, it's bearish
INVESTMENT ADVISER SENTIMENT	Weekly poll by *Investors Intelligence* of newsletter sentiment—a contrarian indicator. Rampant bullishness is bearish

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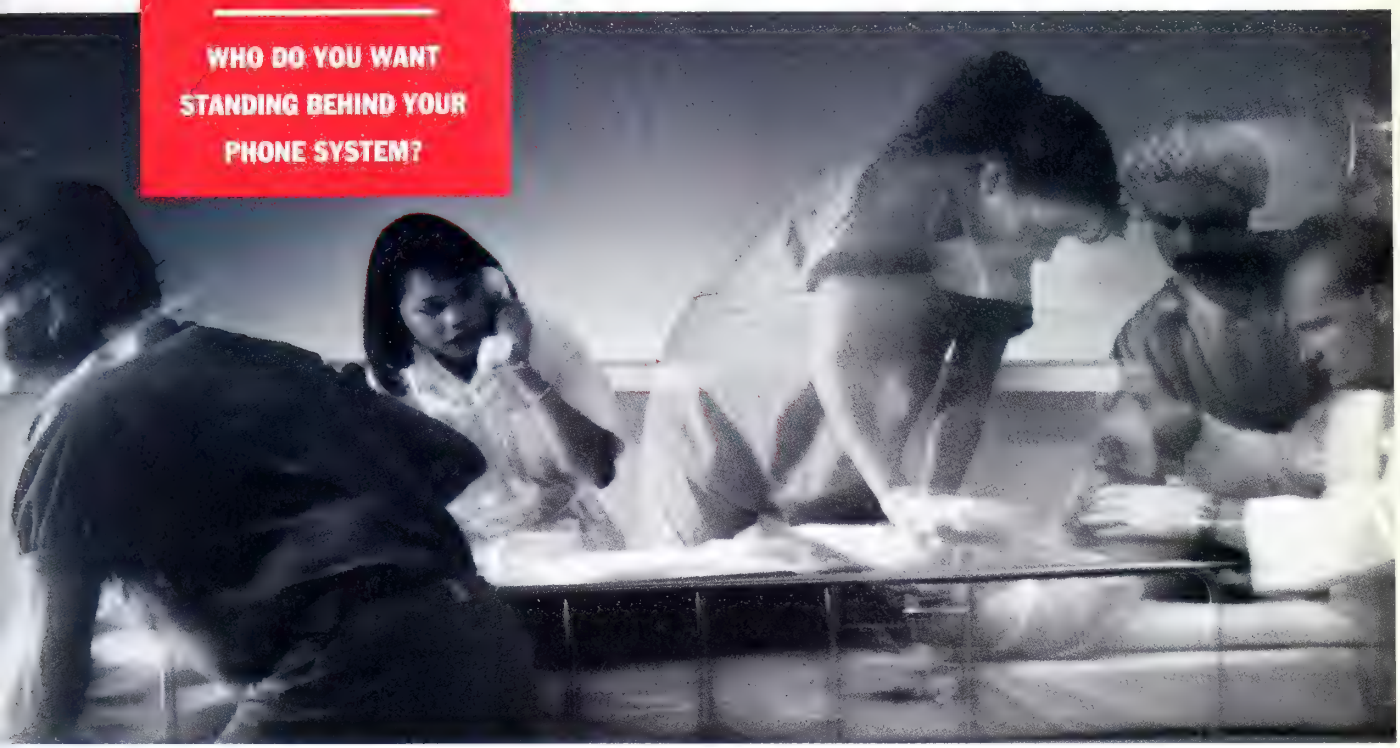

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Computers, Communications, Microelectronics

BY GENE G. MARCIAL

RECOGNITION: WILL THE STREET SEE THE LIGHT?

For a company that makes equipment that "reads" even the most arcane printed characters, including the ubiquitous "bar" codes, Recognition Equipment isn't getting much recognition on the Street. "Investors don't fully understand the company's turnaround and bright prospects," says money manager Ed Wachenheim III.

The company's shares have been seesawing between 6 and 8 since August, even though Recognition has disposed of at least eight operations, sharply cut costs, and pared down debt. In the past three years, the company has been in the red. But this year, it expects to turn the corner. Some analysts think Recognition will post earnings of 30¢ to 50¢ a share for the Oct. 30 year.

"The stock is undervalued based on its current operations," says Wachenheim, managing partner at Greenhaven Associates. But the stock is worth much more, he contends, partly because of the company's newly acquired Plexus Software division. The Plexus software is designed to "capture" the image of documents electronically. The image, or picture, is stored on a disk for retrieval, reducing paperwork in complicated data processing tasks, explains Wachenheim.

"The market for imaging software is vast, including the insurance and health care industries," says Wachenheim. Plexus could increase the value of Recognition to $20 a share. Excluding the impact of Plexus, Recognition is already worth "at the very least $10 a share," he figures.

The smart money has been accumulating Recognition shares recently. One investor group, led by Central National-Gottesman and Asgot Securities, has raised its stake to over 10% from 8%. Prospect Group, an investment company, has distributed to its own shareholders a big part of its 50% interest in Recognition but still owns 14%. Recognition's management holds 10%.

One big investor believes that the company, whose stock traded as high as 23 in 1987, has become "quite attractive to some companies, such as Pitney Bowes and AT&T." He explains that AT&T, in particular, is interested because Recognition would be a "neat strategic fit" with its recently acquired NCR unit, a major player in the computer data processing and business systems market. Says this pro: "I know that a couple of senior executives favor selling the company at the earliest opportunity." An AT&T spokesman declined comment on Recognition. But he added that AT&T will consider any acquisition that may fit its overall strategic plan. Pitney Bowes declined comment. Recognition's co-CEO Bob Vanourek says the company, with its cash resources and game plan, seeks to expand through acquisitions.

RECOGNITION EQUIPMENT CONTINUES TO SEESAW

DATA: BRIDGE INFORMATION SYSTEMS INC

INVESTOR, PHONE HONG KONG

What telephone company operates with an efficient modern communications network, low cost structure, and a balance sheet that's almost debt-free and generates a return on equity of 44%? AT&T, you say? Not even close. Try Hong Kong Telecommunications, whose ADRs (American Depositary Receipts) have risen on the Big Board from 23 in June to 30.

Investors haven't gone ape over HKT because the company's exclusive franchise to provide local telephone services in Hong Kong expires on June 30, 1995. And in July, 1997, Hong Kong will become a region of the People's Republic of China. But some of the smart-money crowd is convinced that investors are overly pessimistic about the outlook for HKT. For one thing, the Chinese government owns 20% of HKT stock, which should assure the company's continued dominance in Hong Kong, they say. Cable & Wireless (Hong Kong), the British communications giant, still owns 58% of HKT's stock, with the remaining 22% of the shares in public hands.

Second, HKT's exclusive franchise to provide international services in Hong Kong doesn't expire until September 30, 2006. China accounts for about 40% of such traffic and 20% of revenues, estimates analyst Stuart Crane of A. R. Schmeidler, a New York investment firm that has been accumulating HKT shares. Crane says those figures should increase to 65% and 45%, respectively, by 2000. He notes that there is only one telephone per 100 people in China today, vs. Hong Kong's 57 phones per 100 people. Crane says the stock is "clearly undervalued" and worth perhaps twice its current price.

THIS CHEESE MAY NOT STAND ALONE

Three years ago, Alpine Lace Brands, then named First World Cheese, was riding high, trading at 21, as rumors were flying that the company was a takeover target of Kraft, the giant food company. When no bid surfaced, the stock collapsed.

The stock is now at 4. Some analysts who say the shares are fully valued point to disappointing earnings and a price-earnings ratio of 18.

Big players are moving in, however. The reason: new takeover speculation. One investment manager says RJR Nabisco heads a list of three companies currently eyeing Alpine. He believes that based on projected earnings and the value of the company's 5,000 "slots," or display sites, in supermarkets around the country, the stock is worth $15 in a buyout deal. Alpine Chairman and CEO Carl Wolf declined comment on any takeover interest. RJR also declined comment.

There is also good news in Alpine's outlook. The company has produced a fat-free cheese in addition to its line of low-cholesterol and low-salt cheeses under the label PréMonde Alpine Lace.

The company, which is focusing its marketing on the high-margin dairy products end of the nation's groceries, is betting that earnings and sales will rapidly improve. Wolf sees sales climbing to between $180 million and $200 million next year from 1991's estimated $155 million and 1990's $141 million. And some investors believe the company will earn 40¢ a share next year, up from an estimated 22¢ this year and 1990's 19¢.

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ARE MULTIPLE-CHOICE TESTS ABOUT TO FLUNK OUT?

Reform-minded educators push 'performance assessment'

Standardized, multiple-choice tests:

(a) Are used by schools so they can get federal aid for the needy.

(b) Force schools to design curriculums around them.

(c) Have been criticized as biased against minorities and females.

(d) All of the above.

Answer: (d).

It has been 70 years since the first standardized exams crossed school desks. And in that time, the test-publishing industry has managed to weather attacks from teachers, administrators, and other reformers who consider the multiple-choice exams at best a nuisance and at worst creators of an educational caste system. Today the publishers of such elementary- and high-school exams as the Iowa Tests of Basic Skills, the Stanford Achievement Test, and the California Achievement Test rake in an estimated $500 million a year from test sales and scoring services.

Now the industry faces perhaps its biggest challenge. The school reform movement, with President Bush as its cheerleader-in-chief, is gaining momentum across the country. A key element of many plans is an overhaul of the way students are evaluated. As an alternative to standardized tests, reform-minded educators are advocating a very different sort of examination, called performance assessment. Instead of fill-in-the-blank questions, exams consist of essays, real-life math problems, and scientific experiments—and they're graded by human teachers, not computers.

BIASED. This fall, the Vermont and Kentucky education departments adopted assessments in several grades statewide. And at least 24 other states, including California and Texas, are experimenting with the method. "The multiple-choice test's days are numbered," predicts Brown University education professor Theodore R. Sizer. "They tell us some things about kids, but not very much."

Even without this challenge, providers of standardized tests were facing hard times. Feminists charge that the tests are biased: Young women traditionally score lower on college entrance exams even though they make better grades in high school. Teachers also have gripes. "The tests have such an exaggerated importance that teachers build their lesson plans around them," complains Cinthia H. Schuman, executive director for the National Center for Fair & Open Testing, a student advocacy group.

The push toward performance assessment has already cut into publishers' revenues. Kentucky, for example, used to spend $400,000 a year on testing every one of its 650,000 students. But now that the state has embraced assessment, only students in grades 4, 8, and 12 take multiple-choice tests. Demand for assessment provides an opening for small companies such as Advanced Systems in Measurement & Evaluation, a Dover (N. H.) publisher that helped Vermont and Kentucky develop its tests.

Traditional test publishers think this all may be just the latest educational fad. Performance assessments, they say, take more time to develop and grade, and so are far more costly than off-the-shelf tests. The cost of a multiple-choice test runs up to $4 per child, while a comprehensive assessment exam may cost as much as $100. Critics also charge that scoring is subject to human bias. For instance, teachers evaluate essays on the basis of such criteria as grammar, organization, and tone, and must be trained, like Olympic judges, to rate the work using uniform standards. "Once people realize the problems associated with assessment, the bandwagon will break down," says Michael H. Kean, a spokesman for CTB Macmillan/McGraw-Hill, a joint venture of Macmillan Inc. and the publisher of BUSINESS WEEK.

HURDLES. But the big test companies are hedging their bets. CTB Macmillan/McGraw-Hill, Houghton Mifflin's Riverside Publishing, and Harcourt Brace Jovanovich have launched their own versions of performance-assessment exams within the past 18 months. Assessment "is sufficiently important to develop a product to meet it," says Terence J. Heagney, assistant director of external affairs at Houghton Mifflin Co. The publishers won't discuss sales of their new products, but Maryland schools are trying out a McGraw-Hill test this year.

Performance assessment does face some hurdles. For one, under a federal program that funds remedial education for disadvantaged children, schools must give eligible young people tests that can be compared nationally. That effectively gives test publishers a captive market of more than 5 million children, or 10% of the elementary-school population. But policymakers in Washington are considering ending the requirement in 1993.

Test publishers have always gotten good marks in meeting such challenges. The next few years will determine if the industry will make the grade this time.

By Christina Del Valle in Washington

A DIFFERENT WAY OF TESTING

Below are excerpts from a performance assessment exam used in Vermont public schools to test fourth graders.

DIRECTIONS: You have 90 minutes to work on a paper that tells about an experience you had in the past. Read the writing task and think about the subject. You may use a dictionary or thesaurus as you revise and edit your rough draft.

WRITING TASK: Think about a time when you felt happy, scared, surprised, or proud. Tell about it so the reader will understand what happened, who was involved, how the experience made you feel, and why it was important to you.

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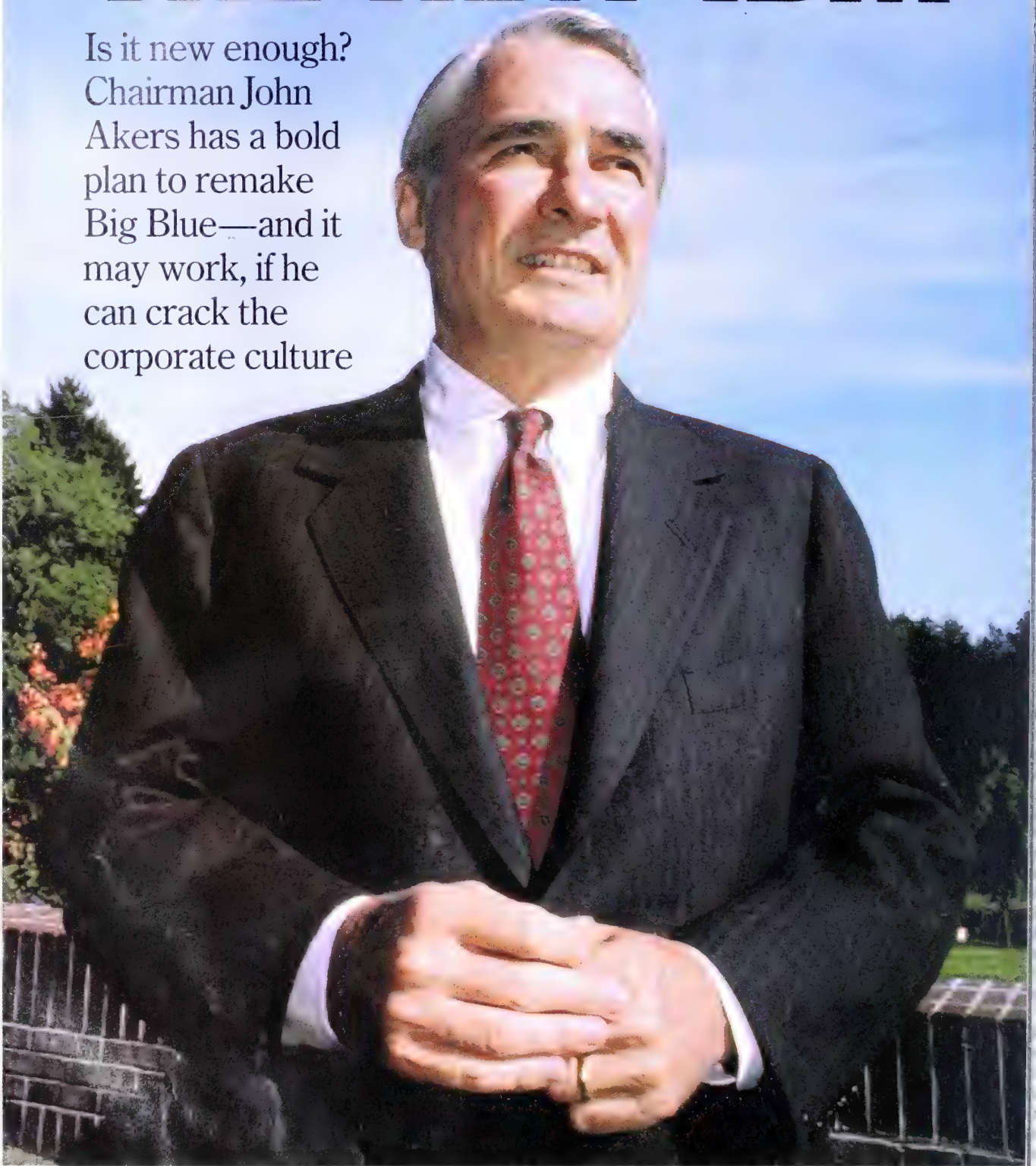
THE NEW IBM

Is it new enough? Chairman John Akers has a bold plan to remake Big Blue—and it may work, if he can crack the corporate culture



At first, it looked like the kind of news that investors had long hoped IBM would make—a top-to-bottom shakeup to clear out the deadwood, "empower" the remaining workers, and finally begin the process of restoring Big Blue's luster. With rumors of an upheaval spreading, IBM issued a news release on Nov. 26, describing a bold plan to create autonomous businesses from the monolithic computer giant—perhaps even spinning off entire new companies with their own stock and boards of directors. At the same time, 10,000 workers would be eliminated, and not just through the traditional IBM voluntary programs that had inadvertently encouraged the best and brightest IBMers to leave. This time, IBM was going to cut back by firing the laggards.

The plan, which top executives at the company's hilltop headquarters in Armonk, N.Y., herald as "The New IBM," isn't quite as radical as it first seemed. But as outlined to 500 managers flown in from divisions around the world on Dec. 4, it creates a new corporate structure that would begin by decentralizing authority and decision-making from IBM's all-powerful management committee and ultimately leave some parts of the computer giant almost freestanding, independent companies. Starting with a handful of units now, IBM will create perhaps dozens of semi-independent operations. They will be freed of big corporate overhead expenses and, over time, will assume their own profit-and-loss responsibility.

HUGE POTENTIAL. The new IBM would resemble a holding company. Headquarters executives will be there to offer guidance—if needed. But heads of the new units, in theory, will act as CEOs. They'll present annual business plans and promise IBM a certain return on funds invested. If they succeed, they'll earn a share of the profits. Some may even be allowed to float a portion of their shares in public markets.

If IBM really can disperse decision-making from Armonk, it stands a chance of unleashing enormous resources. Hidden within the troubled $67 billion goliath are the world's largest personal computer company, a software organization five times the size of Microsoft Corp., and a disk-drive maker that dwarfs industry "leaders" such as Seagate Corp. (chart). But many of these units have been held back by headquarters-mandated policies that stopped them from competing flat-out with nimble young upstarts. More significant, because so many important decisions have been left to headquarters, managers haven't been motivated to take risks—or responsibility for decisions that backfire.

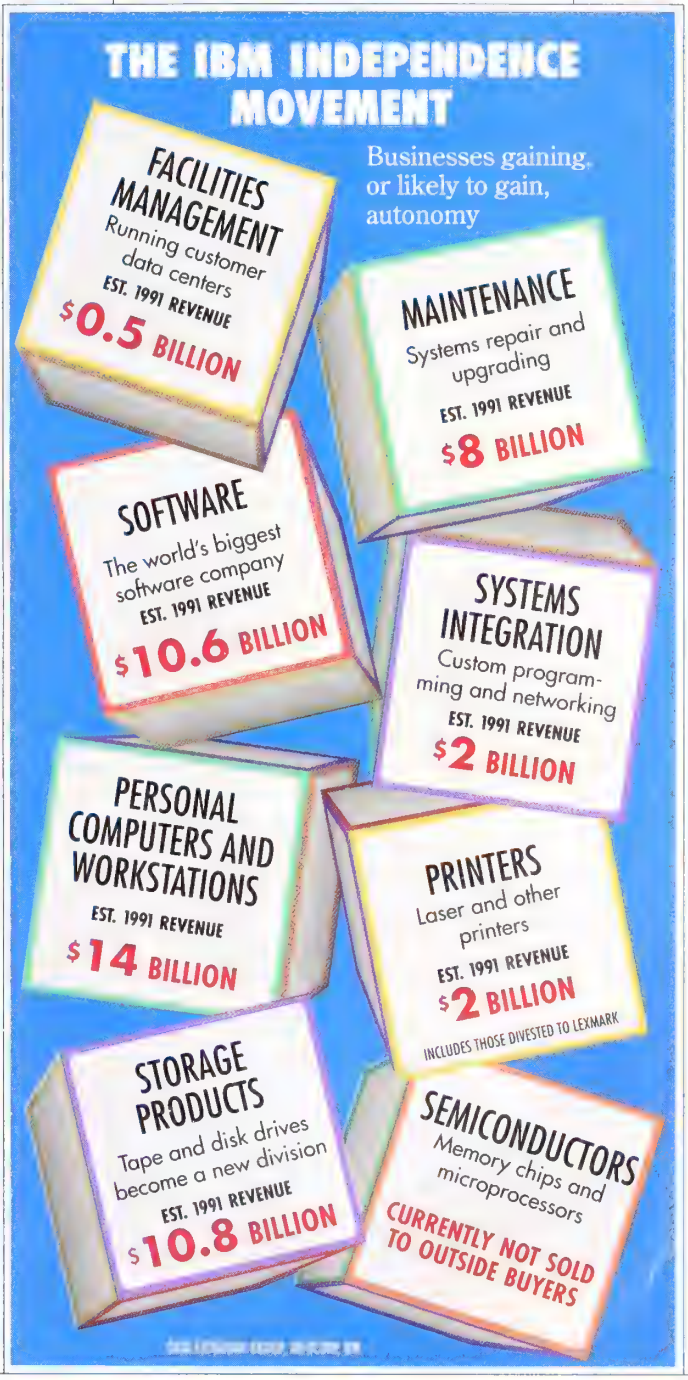
That has already changed. IBMers—even those at the highest levels—now know that their jobs are at stake if they don't deliver the goods. CEO John F. Akers telegraphed that message with stunning clarity on Nov. 25 when he removed George H. Conrades as head of the company's debilitated U. S. sales division. Robert J. LaBant, who helped lead the company's resurgence in minicomputers, was rewarded with the top sales job. A few days later, Carl Conti, head of the company's beleaguered mainframe unit, announced that he is taking early retirement. The moves sent shock waves through IBM (page 115).

To most corporate executives, this may sound like Management 101. But at IBM, it constitutes what Akers is calling a "fundamental redefinition" of the business. It spells the end for the Big Blue cocoon, an organization that insulated most managers from unpleasant details like profit-and-loss statements and kept them employed even when their performance was mediocre. Industry-watchers say these days even Akers could be axed if the board finds his performance wanting.

Understandably, there are plenty of skeptics. Reshaping and decentralizing IBM, General Motors, or any other giant organization is a Sisyphean task that takes years of reprogramming, observes management consultant Tom Peters. "Corporate culture has more to do with the mind than with the organizational chart," he cautions.

HALF MEASURE. No IBM-watchers are more skeptical than those on Wall Street, where a series of comeback plans over the past few years has raised hopes that were inevitably dashed. Even before details of this reorganization were made public, analysts had second thoughts. The stock jumped immediately after the Nov. 26 announcement but soon fell as analysts learned that the changes would be evolutionary, not the sudden overhaul that the announcement implied. They began focusing again on the near term—on the $3 billion charge IBM will take to eliminate jobs and continuing problems in businesses ranging from mainframes to laptops. By Dec. 4, the stock had slumped to 90, its lowest point since 1983.

Wall Street's big fear is that this is another halfway measure—like the $2.5 billion writedown in 1989 that was supposed to restore the company to fighting trim. "They've done it, but they haven't done it," says PaineWebber analyst Stephen



▲ ABMSTRONG
WITH THE DEPARTURE OF
CONRADES, HE IS AKERS'
UNLIKELIEST SUCCESSOR

▶ CANNAVINO
HIS PC DIVISION WILL
HAVE AUTONOMY IN PRICING
AND MARKETING

Smith of the reorganization. "What's wrong is that there's one sales force. What needs to happen is that each of these businesses gets their own." To really free IBM's business units to compete, he asserts, they need their own sales teams, rather than relying on the corporation's mainframe-oriented reps.

And, Smith says, cutting 20,000 jobs is not enough. That move, he estimates, will restore just one point of gross profit margin, which has dropped from 56% to 51.5% since 1986. Even with the $1 billion that IBM says it will lop off expenses next year, he estimates that it will only earn $7 per share, down 33% from 1990.

The new IBM may not be gestating as quickly as investors might like, but IBM is reaping praise for at last moving in the right direction. "The restructuring is a heroic effort to rebuild a leadership role for a company that is one of the industry's greatest success stories," says Michael Mirow, vice-president for planning at Germany's Siemens. "It will be a very difficult task." Adds John Sculley, chairman of Apple Computer Inc.: "If IBM does this well, it could really surprise everyone and come out a juggernaut again."

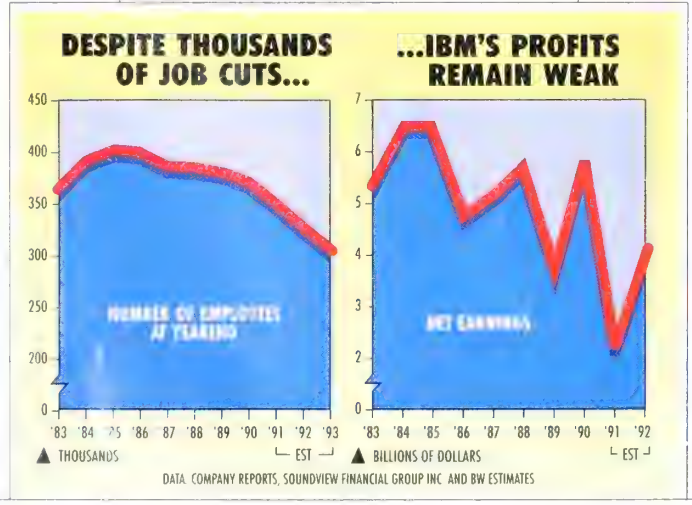
Clearly, IBM has little choice but to try bold measures. In the past six years, it has seemed all but powerless to respond to the accelerating pace of change in the computer industry. The company that started off the 1980s by declaring itself America's best defense against a surging Japanese computer and electronics industry limped into the 1990s. It had fallen behind in PCs, dropping from a 27% market share to 16.5%. It was a late starter in the hot new markets for workstations and laptops. And it failed in a massive software-development effort that was intended to keep its mainframes relevant in an era of superfast microchips. All in all, IBM's share of the world computer market dropped from 36% to 23% in the 1980s, according to the Yardstick Service of market researcher Gartner Group.

As rivals chipped away at its markets, IBM's profits sank. Starting in 1987, the company began eliminating jobs through attrition and costly early-retirement programs. In all, 53,000 jobs were cut. Still, IBM's earnings have continued to decline (chart). Worse, with economic slowdowns crippling demand in all its major markets, revenue is expected to decline 2%, to $67 billion, the first revenue drop since the 1940s.

ALBATROSS. That dismal picture, say company insiders, finally spurred Akers to get to the heart of the matter. In an era of rapid technological change, where the life cycle of a notebook computer is as short as three months, for instance, IBM's old management structure is an albatross. Endless meetings are required to review new product plans, making it nearly impossible for IBMers to bring innovative machines to market quickly.

Yet getting to market first with new technology, above all else, is the name of the game. "You can be the most brilliant designer in the world. But if someone else uses a newer generation of technology, their box will be smaller, it'll run faster, and it will cost less," IBM President Jack D. Kuehler often says. And by being first that other guy earns enough to move quickly to the next technology and beat you again, he notes.

Despite a 1988 reorganization that was supposed to speed up decisions by giving more authority to six group executives, even now few moves are made without headquarters approval. Former executives say Armonk policy continues to be dominated by the mainframe computer division, which still delivers half of IBM's overall profits. As a result, products or marketing initiatives that are even vaguely competitive with the mainframe have often been derailed, former IBMers say. "The mainframe guys have been a ball and chain around IBM's neck," says James N.



orter, a disk-drive industry consultant. Take one recent example. Last year, BM's PC unit was ready to launch a new odel to get it back into the fast-growg laptop market after an embarrassgly poor showing a few years earlier. o be competitive, division chief James annavino priced the machine at $4,995. rmonk, however, insisted on a $5,995 g, to hit corporate profit-margin tarets. That made it easy for ozens of laptop makers to ndercut IBM's price. Now e price has been cut to 3,645. But the laptop has ever recovered from its ow start.

Theoretically, that won't appen in the new organizaon. Cannavino's $14 billion C group, one of several that ill be given relatively wide titude, will be permitted to et its own pricing in all reions where PCs and workstations are sold. And for the rst time, Cannavino will ake decisions about how Cs and workstations are anufactured and developed. he new structure gives his nit control over long-term evelopment so that PC researchers won't have to comete with mainframe developers for resources.

The price for this freedom ill be accountability. Startg with the 1992 annual reort, insiders say, IBM will reak out the profitability of arious groups. Managers ill be measured against rofit goals. They'll be free o reach those targets and ave a big incentive to suceed. In the new IBM, emloyees who fall short won't e around indefinitely.

UMMED UP. In a small way, BM has already seen autonony work. For example, the ochester (Minn.)-based divion that builds hard disk rives for IBM PCs and other achines has been set loose o pursue new markets. It ow sells to other computer akers, including Apple. The ivision, which is being comined with mainframe disk nd tape units, will get more utonomy now.

A big plus from the new tructure may be greater leeay in doing business with ther companies. IBM has entered into hundreds of technology, marketing, and consulting partnerships in the past decade, but its track record has been spotty, often because headquarters bureaucracy slowed things down. There are "too many people, too many layers of management," complains Gerald Cohen, CEO of IBM software partner Information Builders Inc. The decentralization "makes me feel better and better about the partnership with IBM," says Apple's Sculley.

But there are serious risks for IBM. Freeing a bunch of Baby Blues could diffuse IBM's focus. One of IBM's great strengths has been its ability to cobble together comprehensive information systems. Each of the IBM pieces might not be the best of breed, but customers have been willing to sacrifice some performance and pay a higher price to get IBM to handle the complexity. That's one reason why IBM's sales force is expected to remain intact. "We'd be very concerned if we had to spend all our time coordinating among IBM business units to get something done," says Steve Bouch, director of technical services at British Telecommunications.

Still, IBM has little choice but to unfetter its businesses. Markets such as software, services, PCs, and workstations have long-term growth potential, while IBM's mainframe business is looking increasingly vulnerable. To move its largest ES/9000, it is cutting prices by as much as 50%. Even with discounts, however, customers aren't very interested because they can get the same computing power for one-third to one-half less by buying a used IBM processor. "There's no compelling reason to buy the product," says analyst Stephen Cohen of Soundview Financial Group.

The biggest threat to mainframes, however, is from new, superfast microcomputers. The fastest RISC (reduced instruction-set computing) chips now match the speed of million-dollar mainframes. Machines built from gangs of microprocessors can run circles around them. Thus, the question for IBM is: "Do we eat our own children, or let others eat them for us?" says Marc Schulman, an analyst at UBS Securities Inc. If IBM is serious about letting its product groups compete freely, he says, the market will soon see cheap mainframe-caliber machines built from the RISC chips used in IBM's workstations.

The most liberating effect of IBM's reorganization could be in software. With broad, strategic goals in mind—mainly boosting mainframe demand—IBM has pushed convoluted ideas such as Systems Application Architec-

ANY COMPLACENT IBMers LEFT?

On the outside, the plan by Chairman John F. Akers to create a "new IBM" has been criticized—particularly on Wall Street—for not going far enough. But on the inside, to many of IBM's 350,000 employees, the reorganization looks like a virtual revolution.

And it's a revolution that has them worried. Indeed, from California to Maine, IBM workers who agreed to talk anonymously say that they're still reeling from Big Blue's Thanksgiving week double whammy—the news that the company will cut 20,000 workers and that George H. Conrades, marketing head of IBM's struggling U. S. unit, had been demoted.

> 'EVERYBODY THINKS THEY'RE GOING TO BE OUT OF A JOB'

PUBLICIZED CUTS. If a smooth salesman and high-ranking executive such as Conrades can be sidelined, whose job is safe? "We are all panicked," says a programmer in IBM's Austin operation. "Everybody thinks they're going to be out of a job. If they wanted to get a message out with Conrades, they did it."

> 'MY HEADHUNTER SAID NOT TO LEAVE IN 1992—I'D HAVE A MARK AGAINST ME'

Others say they're not waiting for their pink slips. An engineer in IBM's San Jose plant says "dozens" of his colleagues have left recently and that he is mulling over an outside job offer. He complains that, despite IBM's avowed respect for its workers, the company has mishandled the way it is cutting staff by letting it be known that the worst performers will soon be forced out. To choose those who have to go, IBM has developed a ranking system that assigns a numerical value—from one to five—to their work. Those with a four or five are at risk. "My headhunter told me not to leave in 1992, that I would have a black mark against me forever," he says. "It's fine to weed out people, but they should have done it years ago."

> 'IT'S FINE TO WEED OUT PEOPLE, BUT THEY SHOULD HAVE DONE IT YEARS AGO'

Instead, IBM sought to shrink its payroll by repeatedly asking employees to leave voluntarily. Firing many workers still shocks those who believed they had a job for life with IBM. "I feel betrayed," says a White Plains (N. Y.) worker. "If IBM isn't growing, is it the fault of the employees or of the senior management?"

Then, there are IBM staffers, particularly those who have been told that their jobs are safe, who say that the company's move to give product units more autonomy will breathe life into their work. "We have incredible technology in our labs," one worker says, "but it's not getting into products. Maybe now it will." If not, this revolution will look mild compared with the next.

By Deidre A. Depke in New York

ture (SAA), a scheme that was supposed to give its different computer lines a sheen of compatibility. The effort has yet to reach that goal. "I haven't even heard the term SAA from IBM in a year," says John Imlay, chairman of Dun & Bradstreet Software Services Inc.

Now, IBM units will presumably be free to pursue "open," industry-standard software more vigorously. "The world's voting with its dollars, and it has said it wants standards independent of IBM," says John B. Jones Jr., who tracks IBM at Montgomery Securities.

TOO COMPLEX. Furthermore, once they assume profit-and-loss responsibility, IBM's software executives are less likely to spend millions pursuing corporate strategies that don't mesh with the market. The prime example is OS/2, an ambitious project to replace the MS-DOS operating system of the original PC. IBM wanted OS/2 to help tie PCs to mainframes. But it was too complex for most customers. Microsoft quit the OS/2 effort and is now cleaning up with Windows, a simpler MS-DOS upgrade. Still, IBM continues to spend heavily on OS/2. "It's incredible how they've been able to fund this," says Microsoft Chairman

WHY EVEN THE JAPANESE ARE WORRIED ABOUT IBM

On Dec. 3, the biggest names in the U.S. computer industry, including the chief executive officers of Digital Equipment, Apple, Hewlett-Packard, and Compaq Computer, marched on Washington. Their group, the Computer Systems Policy Project, was there to lobby legislators and White House heavies, including Richard G. Darman, director of the Office of Management & Budget. The goal? To raise funds for a new nationwide computer network, a project they view as crucial to future U.S. technology competitiveness. But the group's most influential member was missing. IBM CEO John F. Akers stayed behind in Armonk, N.Y., to put the finishing touches on his reorganization plan.

The absence of IBM's chairman left the lobbying group at a disadvantage, yet highlighted just how crucial IBM remains to the health of the U.S. computer industry. Even with its problems, the $67 billion giant is still the dominant force in the business, and restoring its vigor, these executives say, will help them all. "What's really important is if we can get IBM back on the offensive—as a shaper of things—that could be a positive for the whole industry," says Apple Computer Chairman John Sculley, who also chairs the Policy Project.

'WHAT'S REALLY IMPORTANT IS IF WE CAN GET IBM BACK ON THE OFFENSIVE—AS A SHAPER OF THINGS'
JOHN SCULLEY
CHAIRMAN, APPLE COMPUTER

'RUSSIA PROVED THAT YOU CAN'T DO IT ALL CENTRALLY'
KENNETH H. OLSEN
PRESIDENT, DIGITAL EQUIPMENT

Even in Japan, where problems at U.S. computer companies are normally seen as an opportunity, IBM's plans sparked a sense of unease. For one thing, giants such as Hitachi and Fujitsu are suffering their own profit declines. And Japanese customers are worried, too. "If IBM doesn't pull itself together, it could be devastating," says Shoji Sakamoto, deputy general manager in charge of computer systems at Sanwa Bank.

Back in the U.S., IBM's efforts to downsize sound depressingly familiar to a host of troubled computer makers. "You could say, 'welcome to the club,'" says Reto Braun, president of Unisys Corp., the ailing mainframe and minicomputer giant that is the target of a potential takeover by a group of European investors. Like IBM, companies such as Unisys, Digital Equipment, Sun Microsystems, and Compaq are desperately trying to climb out from beneath stifling bureaucracies by revamping cost structures and altering the way decisions are made. "Russia proved you can't do it all centrally," says Digital Equipment President Kenneth H. Olsen.

But so far, none of IBM's competitors have succesfully reinvented themselves. And that leaves many of the industry's top executives skeptical about IBM's latest reorganization. One problem, critics point out, is that the company's plan to grant increased autonomy to certain units doesn't go far enough. "They're going in the right direction," William H. Gates III, chairman of software powerhouse Microsoft Corp., says of IBM's plans for recovery. "But unless they do it in a strong fashion, I don't see it happening."

Big Blue's previous reform efforts have also raised doubts about its ability to really change. "IBM has made a number of changes over the last few years, and the end result is that they haven't been able to demonstrate anything," says G. Glenn Henry, a senior vice-president of Dell Computer Corp. Frustrated by the IBM infrastructure, he quit a high-level IBM research post after 21 years to join the PC maker.

Still, if Akers is serious about re-

'THEY'RE GOING IN THE RIGHT DIRECTION BUT UNLESS THEY DO IT IN A STRONG FASHION, I DON'T SEE IT HAPPENING'
WILLIAM H. GATES III
CHAIRMAN, MICROSOFT

making his company, the doubting Thomases could soon be surprised. Take software. By giving the software groups more independence, says John P. Imlay, chairman of Dun & Bradstreet Software Services Inc., IBM has a chance to "build another culture, a nonhardware culture." That, despite years of frustration, could finally give IBM a leading role in software technology. "They have deep pockets," says Steven A. Ballmer, Microsoft's senior vice-president of system software. "I take it very seriously."

But if the "new IBM" turns out to be not so new after all, U.S. computer executives may find themselves without a center. And future marches on Washington may be far more serious than simple pleas for research funding.

By Deidre A. Depke in New York, with Mark Lewyn in Washington, Kathy Rebello in San Francisco, and bureau reports

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William H. Gates III. "They never would have spent so much on OS/2 if software were a separate company."

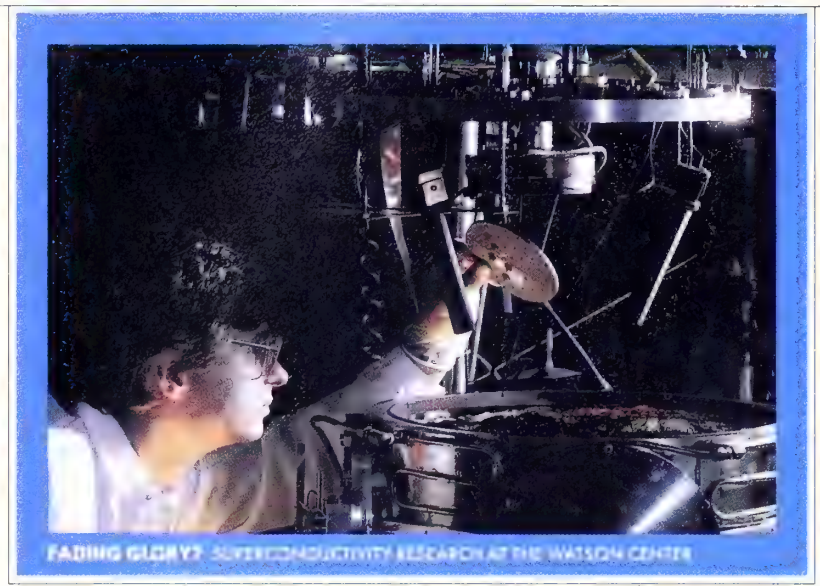
Can Big Blue really change its ways? Even IBM well-wishers question how far the company will go. Indeed, it was Akers who undid earlier decentralization efforts by abandoning his predecessor's "independent business units." The biggest, Entry Systems Div., had ridden the IBM PC business from a 12-man operation in Boca Raton, Fla., to a $5.5 billion, market-dominating business in 1985—mostly by breaking IBM rules. As soon as he became CEO, Akers drew the division deep into the corporate fold.

And no matter how sincere Akers' intentions are now, he and other people molded by lifetimes at IBM may not be equipped to create a truly new Big Blue. "It will take someone from the outside to change the culture," concludes Gilles Tugendhat, a former IBM manager and now president of Paris-based ECS, the leading independent lessor of IBM equipment in Europe. That's the kind of shakeup Akers still hopes to avoid.

By John W. Verity and Thane Peterson in Armonk and Deidre Depke and Evan I. Schwartz in New York, with bureau reports

THE RESEARCH IS FIRST CLASS. IF ONLY DEVELOPMENT WAS, TOO

For decades, IBM has prided itself on its world-class research. Big Blue spends $6 billion a year on its sprawling R&D enterprise with major laboratories in the U.S., Europe, and Japan. And the company's scientists rank among the best anywhere. In 1986, they won the Nobel prize for inventing the scanning tunneling microscope, which enables researchers to spot individual atoms. In 1987, they won another Nobel prize—for achieving high-temperature superconductivity. And in 1990, IBM scientists were the first to build structures only a single atom wide, a crucial step on the road to ultrafast chips.



FADING GLORY? SUPERCONDUCTIVITY RESEARCH AT THE WATSON CENTER

But the company's struggle to reshape itself raises troubling questions: Will IBM's celebrated R&D labs fade as did other once-great industrial labs such as RCA's Sarnoff Center and Xerox's Palo Alto Research Center? In fact, if the turmoil undermines IBM's prowess—especially in physics and semiconductor research—that could deal a serious blow to U.S. competitiveness. "I'm very concerned," says Robert M. White, Under Secretary for technology at the Commerce Dept.

CRACKING THE CODE. Many IBM-watchers in academia, industry, and government, however, believe that the latest corporate shakeup may be just what the doctor ordered. IBM has been aggressive in developing new technologies for its core business—such as new generations of memory chips. But critics say Big Blue has long suffered from a common American disease—it too often fails to bring breakthrough technologies to market successfully. "They just haven't been able to crack the code of how to get worthwhile innovations out of a large company," says Cambridge (Mass.)-based computer communications analyst John McQuillan.

The reorganization could bring research closer to the needs of individual operating units and prevent the champions of existing products from squashing development of threatening new technologies. "Given IBM's history, it may be a healthy move," says a leading computer industry expert.

Take reduced instruction-set computing, or RISC. In the mid-1970s, IBM researchers pioneered this revolutionary technology for designing faster computers. But the advance wasn't rushed into products, largely because it was seen as a menace to Big Blue's core mainframe business. "Everything they do is protecting that mainframe market," says Alan Sims, chief engineer for Cigna Corp., a big IBM customer.

As a result, RISC technology wasn't commercialized until scientists at Stanford University and the University of California at Berkeley, funded by the Pentagon's Defense Advanced Research Projects Agency (DARPA), in effect reinvented it. Then upstarts like Sun Microsystems Inc. harnessed the technology—and they now lead in RISC-based workstations.

Not only has fear of undercutting existing products held IBM back, but so has complacency. Berkeley computer scientist Michael A. Harrison recalls a visit by one of IBM's top software scientists, who described newly published research to programmers at an IBM development lab in California. But few of the programmers even knew which journal the scientist was referring to, says Harrison. "To be that ignorant, it's like having been in a cave for 20 years," he says.

Critics concede that even before the reorganization, IBM had been trying to tackle its R&D problems. It became the driving force in two industry research consortiums, Sematech and the Microelectronics & Computer Technology Corp. It also funded suppliers of advanced chipmaking technology. And it had begun to slash product development cycle times.

IBM has no plans to decentralize its research laboratories. But if the growing pressures lead it to shift its R&D priorities too much to the short term, it may be unable to make the big breakthroughs. Japan is increasing its investment in basic scientific research. To compete in 21st century technologies, American computer companies such as IBM will have to speed products to market and keep their blue-sky science strong.

By John Carey in Washington, with Peter Coy in New York

Do You Make These Six Common Mistakes On Your Taxes?

ix common mistakes can cause you big headaches on your taxes. An oversight re, an omission there. From unnecessary x payments to full blown IRS audits -- you n end up paying too much ... or worse.

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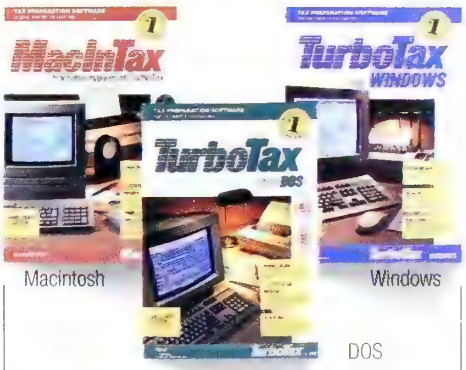

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THE NEW STARS OF RETAILING

They know computers, they know the floor. But most of all, they know the old ways no longer work

Ask Ira Neimark and Marvin S. Traub to reminisce, and you'll get a feel for the heady days of retailing. Neimark, chief executive of Bergdorf Goodman, can still picture the Christmas of 1938, when, as a page at Bonwit Teller in New York, he saw customers such as the Vanderbilts shopping for stocking stuffers, footmen in tow. "I fell in love with the store and the attitude," says Neimark. And Traub recalls arriving fresh from Harvard business school at Bloomingdale's, a barn of a store he later turned into the country's capital of fashion glamour.

Now, the glamour has mostly been worn away by the harsh new realities of retailing. Bonwit's is gone from New York. Bergdorf's operating profits plummeted 82%, to $3.8 million, on sales of $199 million for the year ended in July. Bloomie's parent company, Federated Department Stores Inc., entered bankruptcy in January, 1990. Says Traub: "When I joined Bloomingdale's, I didn't have the goal of running a company in Chapter 11."

Nor will Traub be at the helm as Bloomingdale's and Federated navigate out of Chapter 11, most likely next year. Traub retired on Nov. 15. And this will be Neimark's last Christmas at Bergdorf's: He is retiring in February. At other premier stores, some of retailing's best-known impresarios are departing. In November, Joseph E. Brooks, 64, the former head of Lord & Taylor, abruptly resigned as chief executive of Ann Taylor Inc. The 66-year-old Edward S. Finkelstein, chairman of R. H. Macy & Co., has said he will probably retire in the next few years.

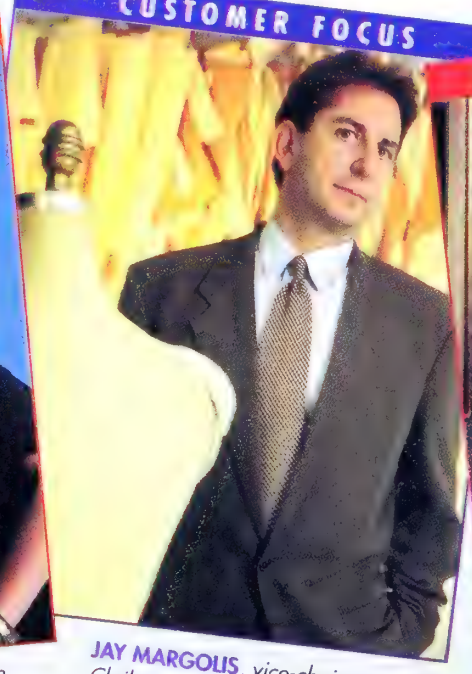
With their departures, an old way of life is ending—the days when a great merchant saw his store as theater and stocked it with sumptuously presented goods. For these merchant princes, selection of merchandise for their emporiums was paramount. Sure, they had to know a thing or two about finance, inventory control, and marketing. But the man with flair for the wares ruled the stores. "The old guard were style pickers, not number crunchers," says Alan G. Millstein, a retail consultant in New York.

WARY SHOPPERS. But it is clear that the old ways don't work anymore. Retail business failures have been surging (chart, page 122). Since peaking in early 1990, the ranks of retail workers have fallen by more than 230,000. And store owners face the prospect of the third crummy Christmas in a row as cautious shoppers cut back even further. "Consumer confidence is back to the same level [as] at the start of the Iraqi war," says Michael Gade,

WEARER-FRIENDLY DESIGN

DONNA KARAN, founder, Donna Karan Co. The 43-year-old designer succeeds on the premise that customers want their clothes comfortable and flattering as well as fashionable. Coming next: cosmetics, fragrance, her own stores

CUSTOMER FOCUS



JAY MARGOLIS, vice-chairman, Liz Claiborne Inc. Margolis, 42, holds focus groups with shoppers and personally canvases salespeople to keep in touch with Liz Claiborne loyalists. Heir-apparent to CEO Jerome Chazen

PRODUCT DEVELOPMENT

GRACE NICHOLS, president, Victoria's Secr Nichols, 45, is constantly trying out new products and enhancing old ones to improv offerings—and boost profits. Products yank tea and cookies. In test: hosiery

o-chairman of Coopers & Lybrand's re-
ail consulting arm. "Retail spending
ill clearly not exceed last year's unless
omething positive happens."

Nothing is likely to save Christmas
rom the Grinch this year. But some
ood may be found in this wrenching
xperience: As the old order fades away,
new breed is rising up in retailing,
ashion, and cosmetics. Some of them
lready have superstar status. Millard S.
rexler, president of The Gap Inc., has
asterfully combined fashion, advertis-
g, price, and market penetration to
each mall-weary shoppers. Each month,
he Gap posts year-over-year sales
rowth of 30% or more.

But Drexler isn't alone: Retailing has
ther young talents who just might rein-
ent their industry. With retailers groan-
g from the hangovers of the 1980s,
ome rising stars are financial whizzes.
thers are computer jockeys. And the
resence of female senior managers sig-
als that women could assume industry
adership.

Above all, this rising cadre of retailers
nd designers understands how impor-
nt marketing is. Where the old-line
erchants seemed to operate on one
mple credo—"Build a store, and they
ill come"—the new breed knows shop-
ers won't come anymore unless stores
ffer them a reason to. "Retailers of
oday have to be market-driven and use
ne customer to tell them what to sell,"
says Douglas Tigert, retailing professor at Babson College. That means relying more on such classic consumer marketing strategies as extensive testing of new merchandise and retail formats.

One rising executive who's working hard to find out what's on consumers' minds is Jay Margolis, 42, the vice-chairman of Liz Claiborne Inc. Margolis briefly attended Columbia University business school. But he has been interested in fashion since his teen years when he bought a bearskin jacket in Greenwich Village. His mother hated it.

FOCUS GROUPS. He has become a better judge of other people's taste. After successfully launching Liz Claiborne's $120 million menswear business, Margolis is now in charge of the $970 million women's sportswear division, where he relies heavily on focus groups and sends consultants to stores to survey shoppers' reactions to Liz Claiborne fashions. "With only a handful of stores doing well, we need to move closer to the consumer," he says.

Recently, Margolis personally asked 180 Macy's salespeople about Liz Claiborne's strengths and weaknesses. They told him shoppers wanted dressier merchandise. Margolis also helped launch Liz Claiborne's first ad campaign for apparel, a $6 million effort.

Grace Nichols, 45, also pays close attention to what consumers tell her. With a master's degree in history from the University of California at Los Angeles, Nichols planned on a law career until she decided she was having more fun at her part-time job at Cadwells Emporium in Los Angeles. In 1986, she joined The Limited's Victoria's Secret division, then showing roughly $150 million in sales. Nichols helped her boss, Howard Gross, turn the lingerie chain into an $800 million business and one of The Limited's most profitable units. Now, Nichols runs the division with an unsentimental dedication to product testing and a gimlet eye on margins. She has to: Sexy lingerie—especially in a recession—isn't exactly a necessity. Says Nichols: "Our business is based on indulgence, which is very different from 'I need a gallon of milk.' "

So Nichols loads up on the lace and beads and never uses such mundane words as underwear. She is constantly looking for ways to raise prices without appearing greedy. One example: Victoria's Secret had sold a lot of loose soap bars at roughly 50¢ each. But Nichols figured a way to sell them for more by packaging fancifully shaped soaps in lace and ribbon. New price: two for $7.50. "That," says Nichols, "is an example of how to move your price point."

The consumer focus and emphasis on marketing is taking hold even in some corners of high fashion, long the province of customer-be-damned arrogance. Donna Karan, for example, represents the new wave of

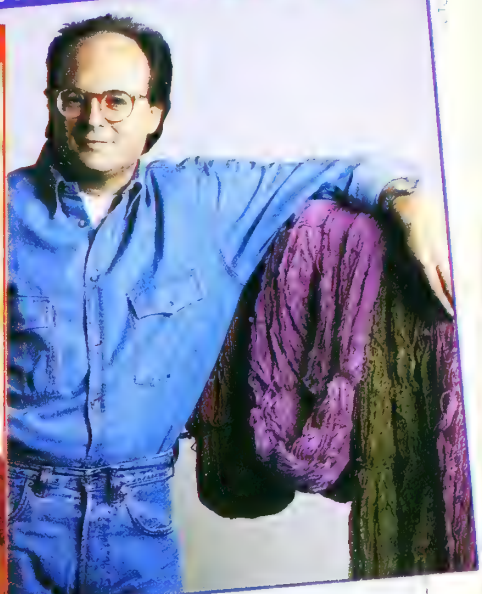
DATA-BASE MARKETING

GEORGE MRKONIC JR., *executive vice-president, Kmart Specialty Stores.* Using data bases and frequent-shopper programs, Mrkonic, 39, builds customer loyalty to Pace Warehouse, Waldenbooks, and Builders Square

INNOVATIVE ADS

ROBIN BURNS, *president, Estée Lauder USA.* Burns, 38, worries that customers who shun department stores won't see her cosmetics. Solution: Reach customers outside the store with flashy ads and promotions

FASHIONABLE VALUE



MILLARD DREXLER, *president, The Gap Inc.* Drexler, 47, offers value galore: The Gap's apparel is attractive and durable, its prices moderate. One location can dress the whole family, and stores are everywhere

designers. Karan, 43, dropped out of Parsons School of Design and went to work for Anne Klein. After being fired and rehired, Karan stayed for 20 years, eventually becoming head designer. In 1985, Tomio Taki, the Japanese owner of Anne Klein, pushed her out of the company—and staked her to her own venture, Donna Karan Co.

Karan has created a startlingly successful company by assuming—correctly—that her concerns about her own figure and comfort are universal. "The woman buying my clothing is in her forties, fifties, and late thirties and has been exposed to an enormous amount of fashion," says Karan. "She doesn't buy clothes just because you design them." Karan's clothes don't work just on ultrathin models: The Donna Karan look incorporates wraparound skirts and draped fabric to flatter older figures. Flattery works: Karan's sales rose to $215 million this year from $163 million in 1990 and, with a new menswear line, will probably reach $250 million in 1992, says Stephen L. Ruzow, Karan's president.

BARGAIN BOUTIQUE. Besides fashions that make sense, the need for value is something these retailers understand. Eugenia Ulasewicz, 38, heads New York's Galeries Lafayette store that opened this fall, a satellite of the French chain. Ulasewicz, a business major from the University of Massachusetts, once wanted to work for Ralph Nader. But after a Christmas stint at Bloomingdale's, she joined its training program. As a protégée of Traub's, she underwent the classic training of a department-store executive. But Ulasewicz sees a simple but crucial difference between then and now. "When I first started, people were buying, buying, buying," she says. "You would never have sales before Christmas."

Her strategy at Galeries Lafayette reflects the new reality. The store sells European fashion in New York's priciest retail district but doesn't use foreign labels as a justification for higher prices. The result: a sort of bargain boutique of the 1990s. Shoppers are snapping up inexpensive cosmetics from France's Bourjois line, and skirts and other apparel are mostly under $300. The Gallic atmosphere is free: Edith Piaf's singing fills the air. The store had aimed for sales of $40 million in its first year, and Ulasewicz says she is on schedule.

The drought of shoppers Ulasewicz is fighting has pinched Estée Lauder Inc., the $2.5 billion privately held cosmetics manufacturer, where unit volume is down. "For many years, we had the luxury of just catering to the traffic already there," says Robin Burns, Estée Lauder's 38-year-old president. "But customers are not coming into the department stores where we're selling our product."

To build traffic, Burns has crafted a set of flashy ads and promotions. She attached videocassettes of a three-minute commercial for Lauder's new scent, SpellBound, to 14,000 copies of the September issue of *Elle* magazine, a publishing-industry first, and sent out an additional 238,000 videos to selected department-store customers. For Christmas, she is selling $20 how-to makeup videos starring supermodel Paulina Porizkova and the model's mother. And Burns is building minishops within department stores where customers can try out products without asking a salesperson for help.

George R. Mrkonic Jr. is not selling makeup videos, but he wants to reach out to his customers, too. As head of Kmart's $7 billion specialty-stores division, the 39-year-old Mrkonic oversees Waldenbooks, Pace Membership Warehouses, Sports Authority, Builders Square, and Pay Less Drug Stores. Mrkonic's four-year plan is to boost the division from 22% to 30% of company sales. To do that, he is relying heavily on data-based marketing. "Retailing is becoming more marketing-driven," he says. "That didn't used to be part of retailers' portfolios."

Mrkonic, armed with a master's in economics from Stanford University and an MBA from Harvard, was running W. R. Grace & Co.'s Herman's Sporting Goods chain by age 29. In 1987, he left to become chief executive of Eyelab, where he boosted sales by collecting data on eyeglass purchasers and sending them regular promotional offers to get them back into the stores for new glasses, even though their prescriptions hadn't changed. Industry sources say he profited handsomely when Pearle Inc. bought the chain for $140 million in 1989.

At Kmart, he has developed membership programs to create huge lists of bargain shoppers, book-buyers, sports enthusiasts, and do-it-yourself homeowners. To handle all the data, Mrkonic relies heavily on sophisticated computers.

BIG RISKS. Financial savvy is also crucial. Before leveraged buyouts, finance in retailing mostly meant making sure prices were higher than costs. Now, takeover-related debt makes the job of financial control critical to the survival of many companies. One retail executive with such skills is Macy's 45-year-old vice-chairman, Myron E. Ullman III, a onetime White House Fellow and former COO of Wharf Holdings Ltd., the Hong Kong conglomerate.

At Macy's, Ullman, 45, doggedly chips away at costs. So far, he has sold off credit-card receivables, raised new equity from insiders, bought back bonds at depressed prices, and reduced debt by $2 billion. His work could still come undone, though he bristles at any suggestion of a Chapter 11 filing. "We're not failing, and we're winning customers back with our marketing," he says.

Like Ullman, many of these rising stars of retailing face daunting challenges, and all their savvy, creativity, and technical skills are no guarantee of success. Verna Gibson, for example, was a longtime head of Limited Stores, the conglomerate's flagship division. But when sales started to slow, she abruptly resigned. Clearly, the professional risks are high for this new generation. But their work in marketing, customer research, finance, and merchandising just may point the way out of retailing's most beleaguered era since the Great Depression.

By Laura Zinn in New York, with bureau reports

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A SMALL MIRACLE IN NEW ORLEANS

How Jim Finks got the Saints out of pigskin purgatory

For Jim Finks, it was the road trip from hell, and he wasn't even headed for a football game. In the spring of 1986, he and other representatives of the New Orleans Saints toured the Deep South to drum up support for the team. At each stop, General Manager Finks would vow that the Saints were finally going to make their fans proud. The usual response: Yeah, right. "There was a certain cynicism because they had heard so many times that 'This is the year.' Then it was the same old Saints, so no one believed us," says Finks.

These days, they believe. The team that once looked more like a Mardi Gras troupe than a professional football team has Bourbon Street rocking. Anchored by one of the best defensive units in the league, the Saints haven't had a losing season since 1986. And with a combination of on-field success and savvy management, New Orleans is one of the five most profitable franchises in the National Football League. Revenues have jumped nearly tenfold since 1985, to an estimated $50 million in 1991 (table). Net profits this year are expected to hit $10 million.

The muscle behind the team's transformation is the blunt, chain-smoking Finks, who became president and general manager in January, 1986. Over three decades in front offices, the former Pittsburgh Steelers quarterback has built five winning teams in two countries and three leagues, including the Canadian Football League and baseball's National League. But Finks, 64, is best known for his accomplishments in the NFL, where he made Super Bowl contenders out of the Minnesota Vikings in the late 1960s and early 1970s and drafted the key players of the 1985 Chicago Bears, who won Super Bowl XX.

LOW-COST TALENT. The Saints, though, may be his crowning achievement. When Tom Benson, a New Orleans car dealer, acquired the franchise for $70.2 million in 1985, the Saints were better known among their few fans as the Aints. Now, they're a league power, with two playoff appearances in the past three years. And despite three straight losses, the club is still a strong favorite to win its first-ever National Conference Western Div. title.

Finks and his head coach, Jim Mora, have managed all this while maintaining one of the lowest player payrolls in the league. Finks's tightfistedness has angered players—and last year, it may have hurt the team. Starting quarterback Bobby Hebert sat out all of last season because Finks wouldn't meet his $2 million-a-year asking price. The Saints slipped to 8-8 and missed the playoffs, and even Finks admits the team would have won a few more games with Hebert in the lineup. But Finks refused to let the quarterback, who returned this year to a $1 million-a-year contract, throw his payroll numbers out of whack. "I recognize the importance of players being paid fairly," he says. "But I also recognize that this is a business where people have their money invested. And they don't expect me to run it like a charity house," says Finks.

TOUGH GUY. That's Finks all over: tough, stubborn, and fiercely attentive to the owners' interests. He has seen NFL life from all sides: as player, coach, general manager, and owner. He owns 3% of the Saints and had ownership stakes in both the Vikings and the Bears. "If you're going to study someone in the league, you start with Jim," says Ernie Accorsi, executive vice-president for football operations at the Cleveland Browns. That's one reason several NFL owners backed Finks as NFL commissioner two years ago to replace Pete Rozelle, who was retiring. Paul Tagliabue got the nod instead, but Finks now sits on the league's competition committee, which oversees rule changes, scheduling, and the like.

Finks may be Mr. Tough Guy with the players, but to the fans, he's Mr. Nice Guy. Before his arrival, the Saints had no marketing department. Now, the team's fan club, which Finks started, has 15,000 dues-paying members. The team throws an indoor tailgate party before each home game and stages an annual festival to give fans a chance to meet the stars.

The fans like the attention. Season-ticket sales have swelled 28% to 51,000, since 1985, and this year the Saints have sold out every game but one at the 69,095-seat Superdome. Regular-season attendance this year is up by almost 20,000 a game from 1985.

Like the NFL's owners, Saints fans hold Finks in high regard. "Jim Finks and the front office are the reason for the team's success. Tom Benson brought a real professional in who knew what he wanted to do and has stuck with it," says Richard LeCorgne, who has missed only two Saints home games in 25 years. To Finks, who can't forget that hellish spring of 1986, those words must sound sweet indeed.

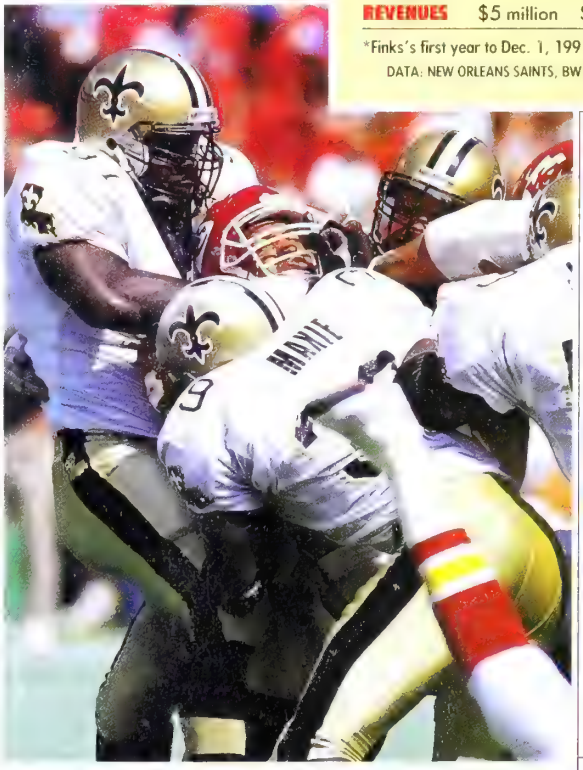
By Stephanie Anderson Forest in New Orleans

THE SAINTS' SIGNIFICANT STATS

WIN-LOSS RECORD	1980-85 29-60	1986-91* 57-37
	1985	1991
SEASON TICKETS SOLD	40,000	51,000
PER-GAME ATTENDANCE	48,559	67,555
ESTIMATED REVENUES	$5 million	$50 million

*Finks's first year to Dec. 1, 1991

DATA: NEW ORLEANS SAINTS, BW ESTIMATES



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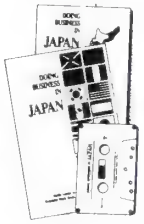

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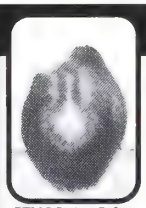

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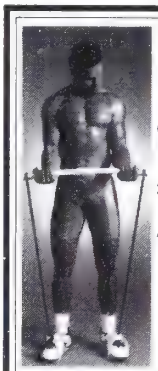

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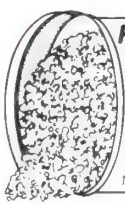

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Computers

MULTIMEDIA IS HERE, AND IT'S AMAZING

Imagine you can control the action on your TV from your sofa. After selecting a video program, you grasp your remote control and assume the role of a character in a mystery, a visitor to a museum, or a game show contestant. Meanwhile, across the house, another family member is working a personal computer that not only plays a symphony as crisply as a compact-disk player but also displays video and animation.

Well, stop imagining. After years of hype, so-called multimedia technology finally is available in consumer-electronics and computer stores.

MUPPET MATH. In essence, multimedia systems are a melding of the CD, the PC, and the TV—a techno-utopian idea, for sure. But because each of these technologies is advancing rapidly and combining in different ways, you may want to see how it all shakes out before you count yourself among the first buyers of these relatively pricey setups.

By far the simplest system is CD-I, unveiled in October by Philips Electronics, the Dutch giant that developed compact-disk technology with Sony. The $1,000 "Imagination Machine" plays conventional 5-inch music CDs and can be hooked up to virtually any stereo. The selling point is its additional ability to connect to your TV and play CD-I disks that look like music CDs but also contain interactive video.

The interactive part is the key. Instead of just watching *Sesame Street*, for example, kids can participate in it. Ernie and Bert appear on the TV, invite you into their apartment, and guide you through activities. Using a handheld remote control with a tiny joystick, you can examine items in their living room. Select a book and it will open so that you and Ernie can read together. Pick the Muppets' TV, and they'll guide you through an interactive arithmetic lesson.

Dozens of available CD-I titles, priced from $25 to $50 each, work in a similar way. *Treasures of the Smithsonian* lets you visit 150 exhibits at the Washington museum complex in whatever order you like. You can learn about the Apollo 11 spacecraft and then play an ancient thumb-piano. Already, Sony and Matsushita have licensed the technology in order to market their own CD-I systems.

The drawback of CD-I is that it hardly acts like the microprocessor-controlled computer that it is. Since there's no way to connect a modem, it can't retrieve information or communicate with the outside world. And unlike a PC, it's not expandable. You won't be able to add new options as they become available—which is certain to happen.

If you prefer a functional computer, there's the MPC, with the "M" standing for multimedia. Ten manufacturers, including Tandy and CompuAdd, are selling MPC machines, which are souped up IBM PC clones. All have in common a built-in CD player that sends digital audio to speakers or headphones. Plus, each has graphical windowing software from Microsoft. The systems play conventional music CDs, so you can do spreadsheets to Springsteen. But the real selling point is the ability to run lookalike CD-ROM disks that contain a rich mix of sounds, photos, moving pictures, and printed information.

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MPC IBM-compatible personal computers with a built-in CD player and digital audio-video capabilities. Manufactured by Tandy and 9 other companies. Includes Microsoft Windows. Priced from $2,600

CDTV These look like large CD players. But they can turn your television into an interactive computer that plays video and animation. Priced at $799

Note: Prices do not reflect retail discounting, which are about 25% lower DATA BW

The more than 60 CD-ROM programs available for the MPC are different from the CD-I titles. They generally contain less video but much more reference material. Perhaps the best example is *Compton's MultiMedia Encyclopedia,* which combines 32,000 articles, 15,000 images, and 60 minutes of sound in one interactive program. When you want to learn about whales, for instance, you not only get several long articles on them, but you also can view photos of humpbacks, hear the sound of them communicating, and even watch an animation of one swimming. Similarly, the MPC version of the popular geography game *Where in the World Is Carmen Sandiego?* is a CD-ROM disk with far more animation, photos, and music than could be crammed onto conventional computer diskettes.

The main drawback of MPC is the expense. The machines are about $800 more than comparable models of ordinary PCs, and the software titles can cost hundreds of dollars each, although many are in the $80 range. Most important, though, you'll want a large hard-disk drive, perhaps 80 megabytes, to store all the needed multimedia files. And you'll want a fast, 80386 microprocessor, so that you don't have to wait 30 seconds or so for images to appear on screen. Today, such a system would cost more than $3,000. Or you can buy an upgrade kit, for about $1,000, that can turn your IBM-compatible PC into a multimedia machine complete with CD-ROM drive.

Since there are so many ways to use multimedia, enthusiasts are predicting that the concept will widen interest in computers. For instance, starting next year, photofinishers equipped with Kodak's Photo CD system will be able to put up to 100 of your snapshots onto a single CD. Then you'll be able to show those pictures on a multimedia PC or CD-I machine. In addition, some multimedia setups allow you to take standard video from a VCR, edit it, add sound, graphics, and text, and then send it back to the VCR for viewing. Likewise, you can hook up musical instruments, such as electronic keyboards, to an MPC and edit songs or overdub sounds on top of a melody—like a professional record producer.

In fact, multimedia aficionados have been doing video and music editing for years on machines from Commodore. Since the introduction of its Amiga computer in 1985, Commodore has been regarded as a leader in multimedia. Last February, Commodore brought out CDTV, which is being marketed more like a piece of consumer electronics than a computer.

Like CD-I, the CDTV system is a CD player that attaches to your television. But unlike CD-I, it's expandable in myriad ways. For $249, you can add a keyboard, a mouse, and a floppy-disk drive to the $799 machine, transforming your television into a working computer that can do word processing and run the thousands of programs developed for the Amiga over the years.

CDTV also plays special video CDs. Costing from $30 to $80, the nearly 100 titles now available are generally not as sophisticated as CD-I programs. Nor are they as information-rich as most MPC titles. Instead, CDTV programs such as the *Lemmings* game included with the system seem like a more sophisticated form of Nintendo. (Nintendo plans to add a CD-ROM drive to its popular game machines.)

INCOMPATIBLE. Like Commodore, Apple has long been a leader in multimedia, except that its forte has been in education, where kids use computers as an adjunct to classroom learning. Some of the best educational software on CD-ROM was available first on the Macintosh. Apple's most inexpensive machines, however, are black and white, which means you'll miss out on all the colorful images.

Of course, none of these four different systems is compatible, meaning interactive CDs for one machine won't run on another. But that's not the main reason to hold off on buying. In two years, you may spot CD-I and CDTV players for about $400 and powerful MPC or Mac setups for about $1,200. Buy now, and you'll pay nearly twice that. On the other hand, you could be the envy of your block as you enjoy a multimedia Christmas. *Evan I. Schwartz*

= MULTIMEDIA

MAC Apple's Macintosh can play music and display video. A drawback is that the inexpensive models ($1,000 and up) are in black and white. CD-ROM drive ($799) needed for mass storage

CD-I Like CDTV, these are machines that attach to your television set and play digital video and audio from special CDs. Controlled by a remote device. Developed by Philips. Priced at $1,000

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Wine

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When was the last time you bought a decent bottle of wine for less than $10? Bargain hunters put off by prices of California or French varietals are discovering unbeatable values in wines from Chile. At $4 to $10 a bottle, they're often half the price of their cousins from Napa or Bordeaux.

In the U. S., Chile has rocketed from a blip to No. 3 among imported wines, after Italy and France, surpassing Germany. The gains follow big improvements in quality since the late 1980s. For years, Chile's wines were rough, tough clunkers, practically in the jug-wine category. Now, Chilean wineries are adopting modern production techniques, jettisoning cement vats and antiquated Chilean oak casks for stainless-steel tanks and barrels made of the preferable French and American oak. The result: fruitier, crisper white wines and smoother, more refined reds.

HALLMARK. Chile's potential is now so promising that Château Lafite-Rothschild bought 50% of Chile's Los Vascos winery in 1988. And Franciscan Vineyards of Napa Valley invested in Errazuriz Panquehue, creating the Caliterra export label.

Restaurants are noticing. Biba, a Boston eatery that features "equatorial" cuisine, has served Chilean cabernets and will feature a Chilean wine as its $5-a-glass house chardonnay next spring. "I'm surprised by the quality," says Craig Gandolf, Biba's wine buyer. "They have worked very hard to make their wines of a more international style."

The country's hallmark has been red wines. "They haven't mastered the whites yet," contends Fred Robbins, manager of The Wine Shop in San Francisco. Indeed, Chilean whites seem less fruity and lively than their California counterparts. Even the reds often lack the generous flavor of a California cabernet.

Still, there are credible contenders. Among the Chilean cabernets, Cousiño Macul's Antigua Reservas is a robus $10 selection with well-defined wood flavor. It tastes substantially better than Cousiño-Macul's regular $7 cabernet. Also worth trying is a $6 Los Vascos cabernet. In merlots, Biba's Gandolf favors Santa Rita or Concha y Toro.

Among its white wines, sauvignon blanc has been Chile's strength while chardonnay is a newer endeavor. Santa Rita's $7.5 sauvignon is crisp and very dry while retaining substance and character. Caliterra's $5 sauvignon is a pleasing bargain. For chardonnay lovers, Gandolf recommends Santa Rita's $1 Medalla Real.

Chile has been making wine since Spanish conquistadors brought vines in the 16th century. Now, the Old World transplants are gaining New World acclaim. *Maria Sha*

NEW BREED: THE WHITES ARE CRISP, THE REDS REFINED

Smart Money

THE 'JANUARY EFFECT': IT AIN'T WHAT IT USED TO BE

In the past, investors have made quick profits on small stocks by playing an annual phenomenon known as the January Effect. This rapid rise in small-cap prices during the first two weeks of the year typically follows two end-of-year events: Investors sell shares to balance gains with losses for tax purposes, and investment managers unload lesser-known stocks and underperformers to dress up their portfolios for yearend review. Then the New Year comes, and investors rush back into these small-cap stocks.

But the January Effect isn't what it used to be. One reason: Professional arbitrageurs have taken notice, and they are using the calendar to profit from small movements in stock prices. But by anticipating the January Effect, the arbs are diminishing its impact. "When such professionals enter the market, it's very difficult to predict what's going to happen," says Josef Lakonishok, coauthor of *The Incredible January Effect* (Dow Jones-Irwin, $24.95).

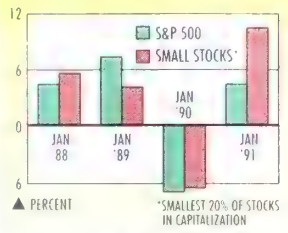
Donald Keim, finance professor at the University of Pennsylvania, cites a built-in hurdle: Spreads between the bid and asked prices of inexpensive, OTC stocks are typically 5% or more. When individuals buy, they usually pay the higher, asked price, but they sell for the lower, bid price. That difference, added to brokerage commissions, can eat into the profits on any January gains.

COLD SNAP. Even sophisticated investors who've profited from the January Effect are backing off. Take Bonnie Wachtel, vice-president of Wachtel & Co., a Washington (D. C.) brokerage. In each of the past five years, she has invested about $100,000 in a dozen downtrodden small stocks, which she buys in the last three days of December and sells in January. Her average annual return over the period has hit 12%, after commissions of 3¢ a share.

But last year, when the market was down, her modest portfolio fell 3.9%, compared with drops of 9% in the S&P 500 and 5% in the Dow. She would have lost even more—7.5%—if she were paying commissions in line with the average 6¢ a share most small investors pay.

Wachtel is still deciding whether to put in the time and effort this year to play the January Effect. She's more certain about her advice to investors: Look for bargains this month in blue chips and small stocks, and don't count on quick gains in January. *Geoffrey Smith*

PLAYING BY THE CALENDAR



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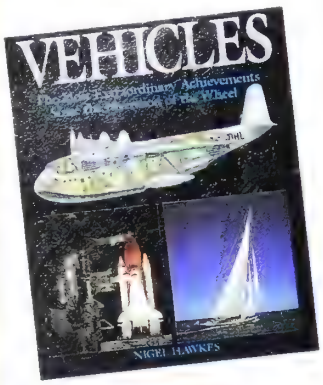
Books

HAVE YOURSELF A COFFEE-TABLE CHRISTMAS

The opulence of things past, distant and exotic locales, high-style photographs, contemporary art, and, of course, sports—they're all on view in this year's best coffee-table books.



■ **YULETIDE PICKS: A BREEZY TRANSPORTATION HISTORY...**

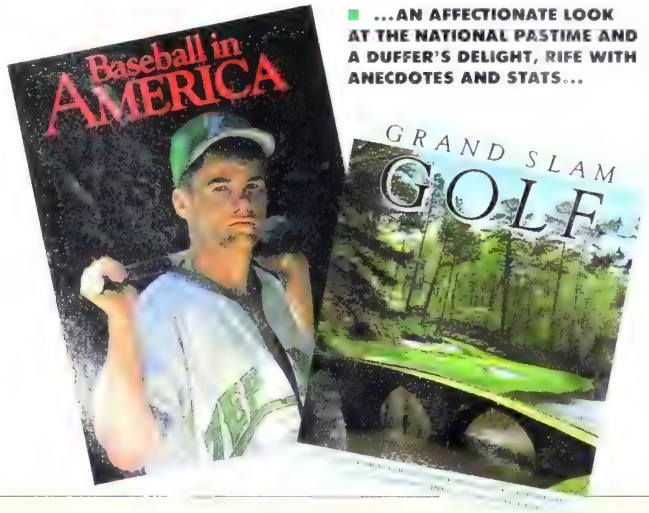
Russia is hot, making *Moscow Revealed* (Abbeville, $50) timely. With sumptuous photos and pithy text, it goes inside czarist palaces, gilded churches, and grand public buildings. The exposed metropolis is surprisingly inviting. Just as appealing is *The Golden Ring* (Abbeville, $45), a tour of nine medieval cities near Moscow, Zagorsk and Suzdal among them. As a chronicle of a bygone era, the book will satisfy history mavens. Others will appreciate the rich photographs that capture the spirit of Old Russia.

For pure opulence, it's hard to beat *The Splendor of France* (Rizzoli, $110), a two-inch-thick tome that presents the stately exteriors and lavish interiors of more than 40 of France's most elegant châteaus and estates. Each chapter, detailing such magnificent places as Vaux-le-Vicomte (owned by Louis XIV's finance minister), includes a brief history.

On the lighter side, *Only in America* (Knopf, $35) is a charming book that captures some preposterous U. S. sights. Where else would you find huge fake crayons appended to a half-colored house or an office building shaped like a bulldozer?

MARSH MELLOW. You'll be stunned by the gorgeous swamps, bogs, and marshes in *Wetlands of North America* (Thomasson-Grant, $39.95). The book helps show why these complex ecosystems must be preserved. And it guides readers to some of the best wetlands to visit.

Mother Nature also astonishes in *Antarctica* (Running Press, $19.98). It displays this vast wintry wonderland's rugged terrain and dramatically recounts how its discovery ignited a race among international exploration teams.



■ **...AN AFFECTIONATE LOOK AT THE NATIONAL PASTIME AND A DUFFER'S DELIGHT, RIFE WITH ANECDOTES AND STATS...**

Speaking of teams, an affectionate look at the national pastime is available in *Baseball in America* (Collins, $45). Roaming from Shea to sandlot, the book goes beyond sports pages to portray the many events that make up baseball. But it lacks the statistics some buffs want. That problem doesn't hurt *Grand Slam Golf* (Abrams, $49.50), which tours 30 prominent courses that regularly host the Masters, U. S. Open, British Open, and PGA Championships. Offering plans, descriptions, and photos of such courses as St. Andrews and Shinnecock, the book is a handy companion for TV-viewing golf fans.

Serious hunters might like

■ **...A DRAMATIC VOYAGE TO THE BOTTOM OF THE GLOBE...**

The Story of the Sporting Gun (Trafalgar Square, $75), which traces in art and words the history of guns and game birds. One drawback: It focuses most heavily on the sport in Britain. Then there's *The Horse* (Abrams, $45), an elegant essay—in words and pictures—about this symbol of wildness, status, and beauty.

MOON BUGGIES. *Vehicles* (Macmillan, $39.95) salutes the world's most significant mechanical horses—and more. This beautifully illustrated, well-written book provides details of the origins, design, and journeys of some 50 record-setting conveyances, from Magellan's tiny ship to Apollo's lunar rovers.

Art Since Mid-Century (Vendome, $50) contains reproductions of many contemporary masterpieces, but this is no mere picture book. It's a substantive survey that puts postwar art in perspective without making biased value judgments. As a cultural chronicle, it's a winner.

■ **...AND A TOUR OF NINE MEDIEVAL CITIES NEAR MOSCOW**

For photography, there's *Passage* (Knopf, $100), which contains many memorable images from Irving Penn's 50-year career: fashion shots, portraits, studies of New Guinea natives, and still lifes, all richly reproduced. Likewise, *Horst: Sixty Years of Photography* (Rizzoli, $85) contains his legendary *Vogue* fashion shots. But the book gains broader appeal by focusing also on high-style portraits of such luminaries as Marlene Dietrich, Sir Noel Coward, and Ingrid Bergman.

Last, a stocking stuffer: *Garden Clippings* (Andrews & McNeil, $15) matches garden scenes with quotes from the likes of Monet, Shakespeare, and Thoreau. So in the spirit of one writer: To all, a good book. *Judy Dobrzynski*

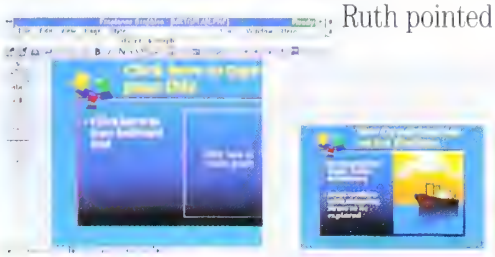
Worth Noting

■ **SAFETY FIRST.** A new newsletter warns of deceptive practices by companies, banks, charities, and more. Compiled with help from consumer-affairs officials, *The Safe Bulletin* costs $39 for 10 issues (201 837-1100).

■ **MOSCOW-WARE.** U. S businesses in the Soviet Union have help with the language hurdle. Relex, a Russian-English software dictionary, provides business terminology on any IBM PC-compatible. It's $175 from ELM International (517 332-4900).

It's been 59 years since anyone's felt this confident in front of a crowd.

It was the '32 World Series. With the Cubs riding him unmercifully from the bench, Babe Ruth pointed



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to centerfield, then promptly hit the next pitch where no ball had been hit before.

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A YEAR OF UNFORGETTABLE MOMENTS IN ONE SPECIAL WEEK

News
Sunday, 10PM

Business News
Monday, 10PM

Sports
Tuesday, 10PM

Entertainment
Wednesday, 10PM

1991

CNN REMEMBERS THE YEAR THE WORLD WILL NEVER FORGET

BEGINNING SUNDAY, DECEMBER 15

CNN

THE WORLD'S NEWS LEADER

Investigative
Thursday, 10PM

Politics
Friday, 10PM

Larry King Looks Back
Saturday, 10PM

Closing Arguments
Sunday, 10PM

All times Eastern

ndex to Companies

index gives the starting page for a story or fea- with a significant reference to a company. Most sidiaries are indexed under their own names. npanies listed only in tables are not included.

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5	IBM
6	Texaco
7	E I. du Pont
8	Standard Oil (Ind)
9	Standard Oil of Cal
10	General Electric
11	Gulf Oil
12	Atlantic Richfield
13	Shell Oil
14	Occidental Petroleum
15	U.S Steel
16	Phillips Petroleum
17	[illegible]

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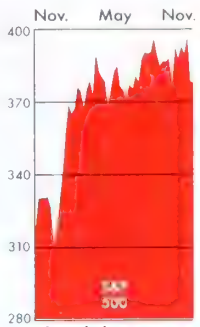
nvestment Figures of the Week

MMENTARY

ck market investors had some-ng to be thankful for: A rally in bond market and some of the vest short-term rates in two cades helped rescue the Dow in-strials from the sub-2900 zone. yond the Dow, stocks looked ch better. The Standard & or's 500 edged up about a half rcent. Small stocks showed the st pep: The Russell 2000 gained 26% for the week. Compared to reign investors, U.S. players uld have no complaints. The panese and British markets each t 1.9%.

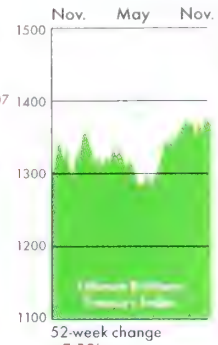
STOCKS



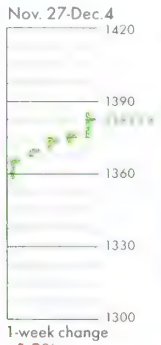
52-week change
+15.2%

1-week change
+0.6%

BONDS

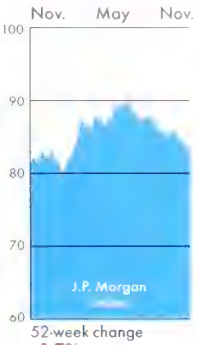


52-week change
+5.1%

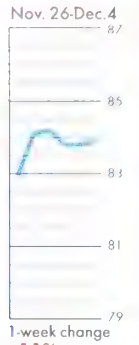


1-week change
+1.2%

THE DOLLAR



52-week change
+1.7%



1-week change
+1.1%

MARKET ANALYSIS

S. STOCKS	Latest	% change Week	% change 52-week
OW JONES INDUSTRIALS	2911.7	−0.2	11.5
G COMPANIES (Russell 1000)	201.1	0.8	17.6
ALL COMPANIES (Russell 2000)	177.8	1.3	36.1
L COMPANIES (Russell 3000)	214.0	0.8	18.5

REIGN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
NDON (FINANCIAL TIMES 100)	2423.8	−1.9	12.6
KYO (NIKKEI INDEX)	22,669.4	−1.9	2.1
RONTO (TSE COMPOSITE)	3427.5	−0.6	6.2

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.43%	4.51%	7.2%
30-YEAR TREASURY BOND YIELD	7.85%	7.95%	8.3%
S&P 500 DIVIDEND YIELD	3.22%	3.27%	3.7%
S&P 500 PRICE/EARNINGS RATIO	21.1	21.0	15.1

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.5	384.9	Negative
Stocks above 26-week moving average	42.9%	42.2%	Neutral
Speculative sentiment: Put/call ratio	0.43	0.49	Positive
Insider sentiment: Vickers sell/buy ratio	2.12	2.09	Neutral

NDUSTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

OUR-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
SPECIALTY APPAREL RETAILERS	14.8	110.3	GAP	21.3	249.6	55 1/2
HEALTH CARE SERVICES	7.2	58.6	MANOR CARE	10.3	37.9	21 3/8
SOFT DRINKS	7.0	40.1	COCA-COLA	8.5	54.6	71 1/2
TOYS	7.0	105.9	MATTEL	13.9	87.6	29 1/4
HOMEBUILDING	6.2	87.8	PHM	14.8	141.4	17 1/2
OUR-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
DOMESTIC OIL	−13.6	−20.6	ORYX ENERGY	−19.4	−42.0	25 3/8
HOSPITAL MANAGEMENT	−12.9	−23.6	NATIONAL MEDICAL ENTERPRISES	−16.4	−28.7	13 3/8
LEISURE TIME	−12.6	36.5	HANDLEMAN	−28.5	27.3	12 1/4
OIL AND GAS DRILLING	−12.5	−42.3	ROWAN	−20.8	−56.3	5 1/4
DIVERSIFIED MACHINERY	−11.3	13.8	VARITY	−21.7	−23.5	16 1/4

MUTUAL FUNDS

MORNINGSTAR INC

ADERS

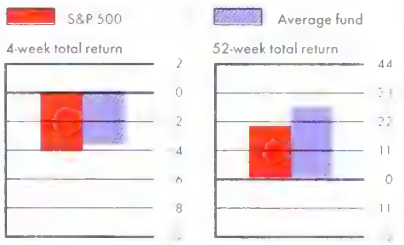
ur-week total return	%
STRATEGIC INVESTMENTS	6.7
UNITED SERVICES GOLD SHARES	6.2
VAN ECK INTERNATIONAL INVESTORS	5.6

-week total return	%
OPPENHEIMER GLOBAL BIO-TECH	108.5
AMERICAN HERITAGE	87.1
OBERWEIS EMERGING GROWTH	86.3

LAGGARDS

Four-week total return	%
G. T. JAPAN GROWTH	−13.1
FIDELITY SELECT ENERGY SERVICE	−11.7
FIDELITY SELECT SOFTWARE & COMPUTER	−11.4

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−23.7
USF&G EUROPEAN EMERGING COMPANIES	−13.5
METLIFE-STATE STREET GLOBAL ENERGY	−12.0



RELATIVE PORTFOLIOS

DATA RESOURCES INC

ollar amounts present the present alue of $10,000 vested one year ago each portfolio

rcentages indicate ve-day total returns

U. S. stocks	Treasury bonds	Foreign stocks	Money market fund	Gold
$12,149	$11,563	$11,485	$10,535	$9,519
+1.50%	+1.06%	−2.82%	+0.09%	−0.33%

l data on this page are as of market close Wednesday, Dec. 4, 1991, unless otherwise indicated dustry groups include S&P 500 companies only; performance and share prices are as of market close

Dec. 3 Mutual fund returns are as of Nov 29 Relative portfolios are valued as of Dec. 3. A more detailed explanation of this page is available on request

HELPING RUSSIA MAKE IT TO MARKET

The landslide Ukrainian vote to become an independent nation on Dec. 1 sounded the death knell for the Soviet Union. But in Russia, the late superpower's largest republic, even more important history is about to be made. Boris N. Yeltsin is poised to propel Russia into a market economy in the way that Poland attempted inconclusively last year. He is about to try what Western economic experts, ranging from the International Monetary Fund to Harvard Yard, urged Mikhail Gorbachev to do for years: free prices, cut deficits, and start making the ruble convertible with hard currencies.

But after lavishly dispensing advice and theory, those same economists, not to mention Russia's 150 million people, are holding their breath. That's because Russia's plunge into capitalism is fraught with extreme danger. The Russian economy is locked in a severe, protracted recession deeper than the worst year of the Great Depression in the U. S. More than half of all Russians earn poverty-level wages. For them to bear price hikes of up to 1,500% within the next several months will require immense fortitude. If goods and food, now being hoarded by black marketeers and farmers, don't show up soon in stores, the resulting backlash could touch off another coup attempt by nationalists or fascists. Unlike August's slapstick comedy, the next one could be a nuclear-tipped doozer.

The West must appreciate the enormity of Yeltsin's gamble. A massive influx of untied aid would be a waste, but there are other ways to help. Western banks could further ease their demands for repayment of more than $84 billion in Soviet debt, most of it shouldered by Russia. Emergency food and medicine shipments should stand ready. And setting up a dollar-backed fund of $10 billion to $15 billion to help stabilize the ruble should be seriously explored. The West has long urged the Russians to swallow this medicine. Now that the medicine is about to go down, it is in the West's self-interest as well as a moral obligation to see that it works.

WILL TOUGH MEASURES TOUGHEN BIG BLUE?

No corporation has symbolized U. S. industrial prowess, management skill, or global reach better than IBM. Amazingly, for a long time, Big Blue was able to maintain effective control even as it swelled to a $67 billion organization operating in 137 countries. That was a tribute to IBM management, which trained its workers carefully, demanded superior performance, and rewarded them with the implicit promise of lifetime employment.

But the decline of the mainframe computer, the company's bread and butter, has turned many of IBM's long-standing strengths into liabilities. The hugeness that once gave it unparalleled economies of scale—and profits—became a burden. Slow decision-making turned what might have been market-leading products into laggards. And with margins dropping, IBM's blue-suited legions began to look less like indispensable assets than unneeded fixed costs.

Now, says CEO John F. Akers, nothing less than a "New IBM" is needed to turn the company around (page 112). Although his plan does not come close to producing a New IBM, it does set the company in the direction it must take. Akers says he will give each product division the freedom and flexibility it needs to move ahead quickly with new technologies. If that's not enough, he hints, some businesses—possibly even the entire personal-computer operation—could be set up as independent companies. The company has unequivocally ended lifetime employment. Those employees who contribute to profits will share in them—and those who don't measure up will be eliminated. To IBMers, that might seem a harsh and abrupt departure from Big Blue tradition. But to Akers, it's what is needed to unleash the true power of IBM at last. Wall Street is skeptical and has sold the stock down. If Akers is wrong, IBM will remain a rudderless behemoth too big to manage. If he's right, a stronger IBM, more than almost anything else, could shore up America's competitiveness in information technology. The challenge now will be holding true to the course.

THE RIGHT FUEL TO RESTART RECOVERY

The rush to stimulate consumption in order to jump-start the economy has propelled the President up and down department-store escalators exhorting Christmas shoppers to pry open their wallets. The rash of tax-cut proposals from Capitol Hill has a similar purpose. But consumer spending has fallen because there is less and less economic growth, causing family incomes to dry up. That won't change until there is a greater willingness to invest in the U. S. economy. There can be no sustained increase in consumption unless higher investment spurs real income to grow faster. Asking the consumer to take on a higher debt burden is no solution.

The U. S. has an investment deficit, not a consumption deficit—as the low savings rate clearly shows. So the real way to get this economy back on track is through an investment package covering both private and public investment. On the private side, an investment tax credit would stimulate investment directly and far more effectively than a capital-gains tax cut ever could (page 31). Such an ITC must, as usual, be limited to investment in capital equipment. And it should continue to be linked to accelerated depreciation on new facilities needed to house new equipment. The public investment program should be a sweeping one aimed at modernizing the nation's crumbling infrastructure, enhancing productivity at the same time it injects funds directly into the domestic economy.

Congress is going to have to face up to the task of promoting an investment-led turnaround—and to the futility of a consumer-led fast fix.

1 December 23

...VELL AN EMPIRE UP FOR GRABS
STRATEGIES ▸SARA LEE ▸EDS

BusinessWeek

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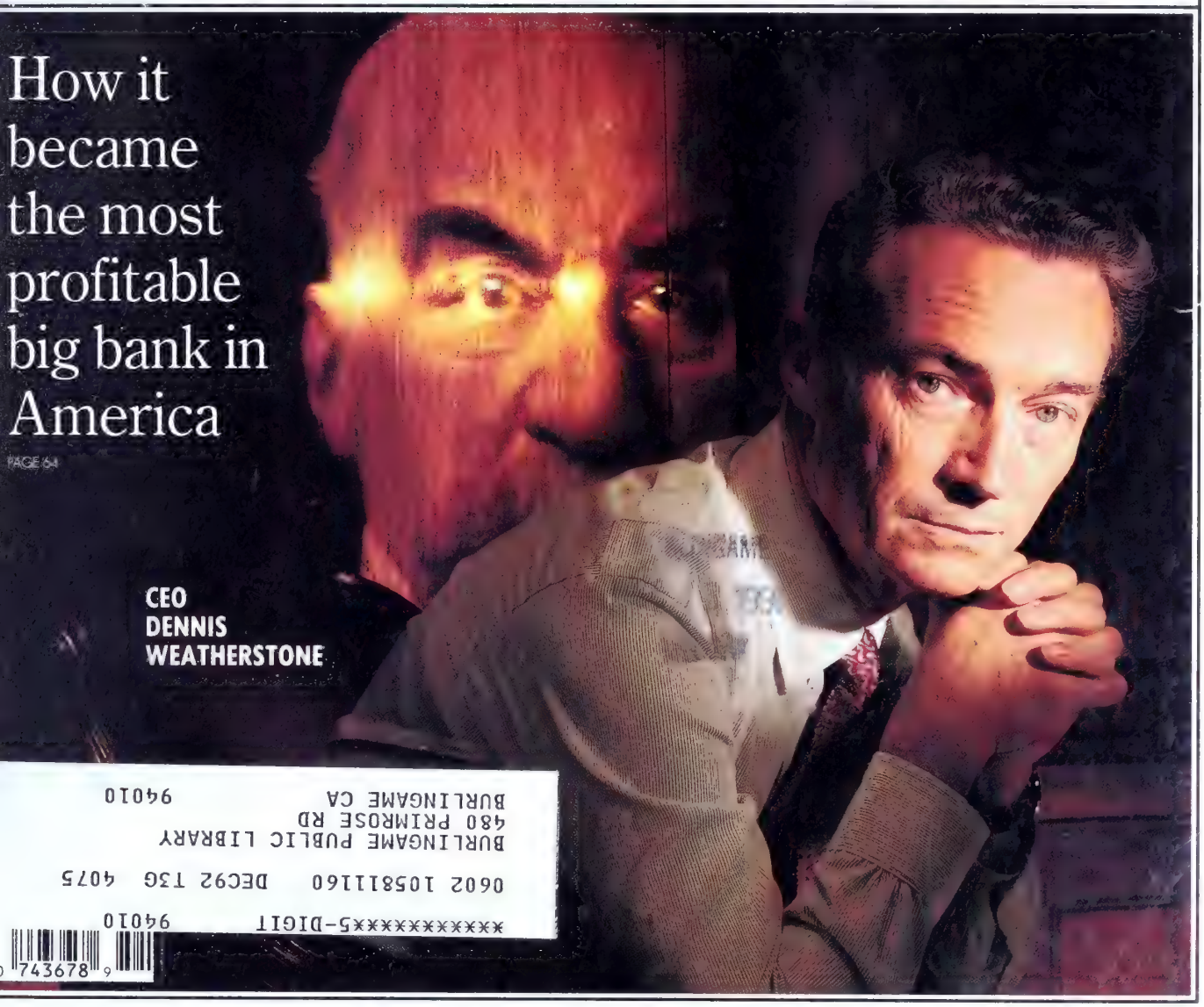
ECEMBER 23, 1991 A McGRAW-HILL PUBLICATION $2.50

REMAKING J.P. MORGAN

How it became the most profitable big bank in America

PAGE 64



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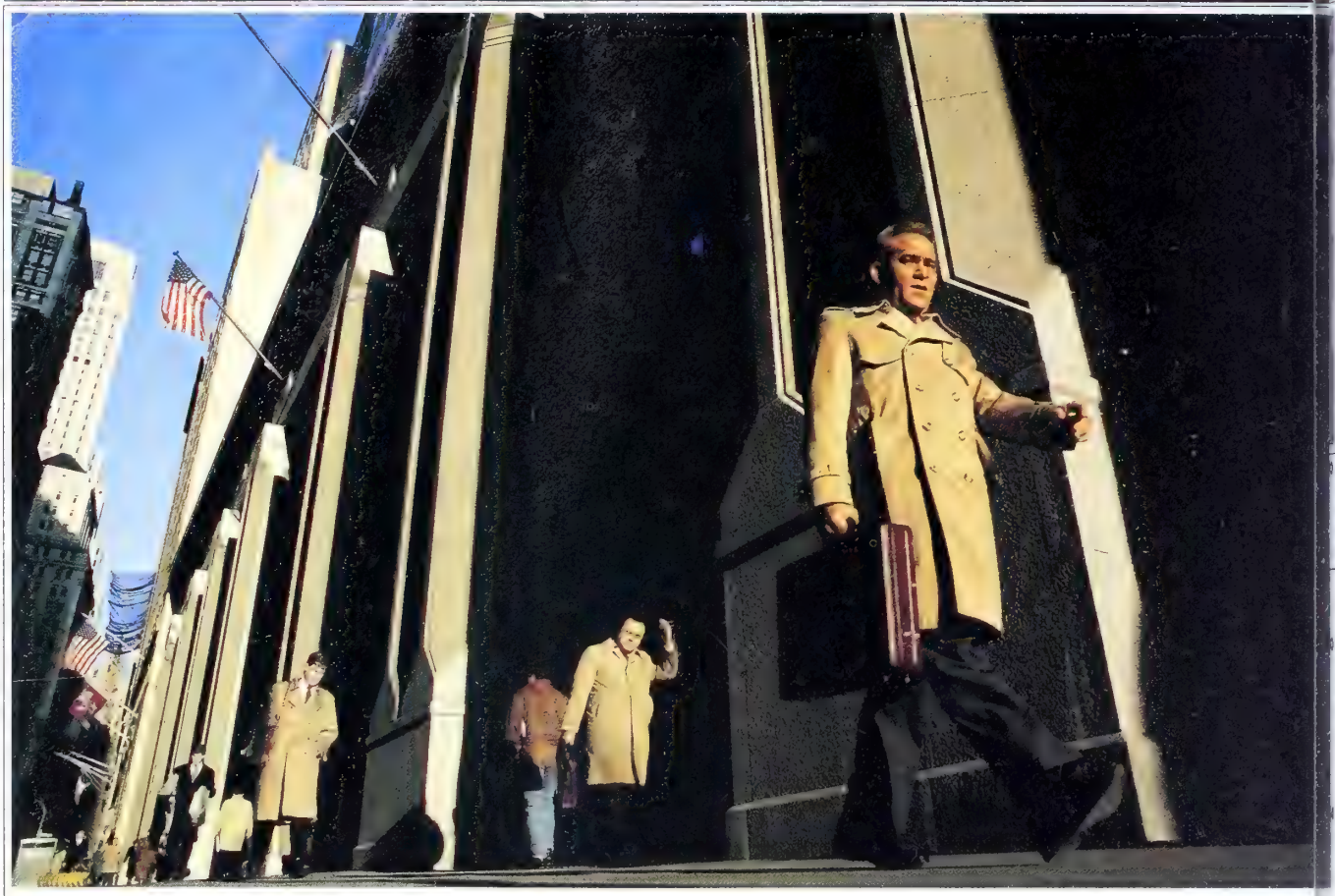
you look closely, you can see yourself. The Accord Coupe.
HONDA

NUMBER 3245

BusinessWeek

DECEMBER 23, 19



WAGS DUBBED MORGAN'S NEW $860 MILLION HEADQUARTERS THE "TAJ MAHAL." BUT NOBODY IS LAUGHING AT THE BANK NOW

Cover Story

64 MIGHTY MORGAN
A lot of people thought J. P. Morgan was too set in its pinstriped ways to flourish in the 1990s. But the venerable bank is remaking itself for the decade. Morgan is becoming a European-style universal bank, without abandoning its careful, conservative traditions. While rivals wrestle with lousy loans, Morgan has clung to its AAA rating, is posting record profits, and has Wall Street looking over its shoulder

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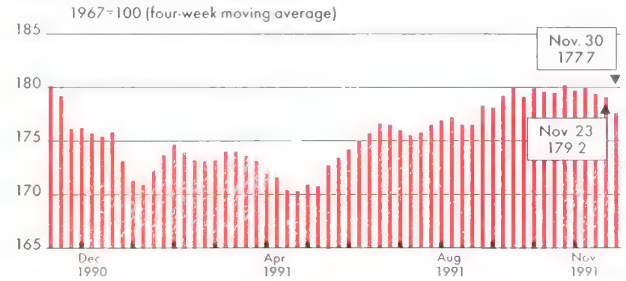
BusinessWeek Index

PRODUCTION

Change from last week: −0.8%
Change from last year: 0.8%

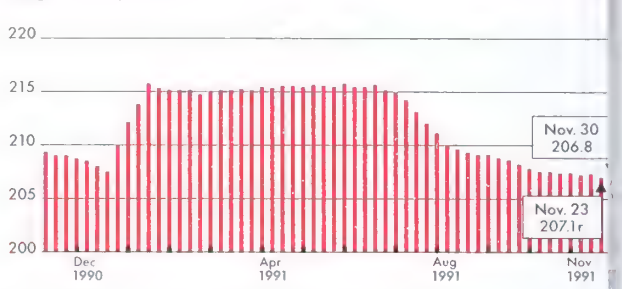


The production index declined during the week ended Nov 30. Output of steel, autos, lumber, coal, and rail-freight traffic decreased, while paperboard output increased. Truck, electric power, crude-oil refining, and paper production were flat. Before calculation of the four-week moving average, the index dropped to 171.7, from 179.8, in part because of seasonal-adjustment quirks from the later-than-usual Thanksgiving holiday. The index fell to 177.7 in November, from 179.8 in October

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: −0.1%
Change from last year: −1.0%



The leading index dipped further during the week ended Nov. 30. Lower stoc prices, an increase in business failures, and another drop in the growth of rea estate loans offset improvement in material prices and faster growth in M2. Bon yields were unchanged from the previous week. Before calculation of the four-wee moving average, the index dropped to 206.1, from 206.3. For the month o November, the leading index fell to 206.8, from 207.5.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (12/7) thous. of net tons	1,614	1,603#	−10.0
AUTOS (12/7) units	126,053	69,377r#	9.2
TRUCKS (12/7) units	81,678	48,130r#	24.3
ELECTRIC POWER (12/7) millions of kilowatt-hours	56,284	53,595#	1.0
CRUDE-OIL REFINING (12/7) thous. of bbl./day	12,738	12,951#	−0.3
COAL (11/30) thous. of net tons	15,756#	21,352	−25.6
PAPERBOARD (11/30) thous. of tons	818.8#	804.8r	7.8
PAPER (11/30) thous. of tons	785.0#	780.0r	−0.4
LUMBER (11/30) millions of ft.	301.5#	518.3	−29.3
RAIL FREIGHT (11/30) billions of ton-miles	16.6#	21.6	−22.4

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (12/11)	129	129	132
GERMAN MARK (12/11)	1.58	1.61	1.48
BRITISH POUND (12/11)	1.81	1.77	1.95
FRENCH FRANC (12/11)	5.40	5.52	5.03
CANADIAN DOLLAR (12/11)	1.14	1.14	1.16
SWISS FRANC (12/11)	1.40	1.43	1.27
MEXICAN PESO (12/11)[3]	3,045	3,051	2,938

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars.

PRICES

	Latest week	Week ago	% Change year ago
GOLD (12/11) $/troy oz.	366.500	365.250	−1.2
STEEL SCRAP (12/10) #1 heavy, $/ton	93.00	94.00	−12.3
FOODSTUFFS (12/9) index, 1967=100	205.6	203.8	−3.2
COPPER (12/7) ¢/lb.	105.8	108.9	−8.8
ALUMINUM (12/7) ¢/lb	49.9	51.5	−29.0
WHEAT (12/7) #2 hard, $/bu.	3.95	3.84	41.6
COTTON (12/7) strict low middling 1-1/16 in., ¢/lb.	53.85	53.74	21.6

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market

LEADING INDICATORS

	Latest week	Week ago	% Chan year a
STOCK PRICES (12/6) S&P 500	379.78	376.27	16
CORPORATE BOND YIELD, Aaa (12/6)	8.39%	8.46%	-8
INDUSTRIAL MATERIALS PRICES (12/6)	95.6	95.6	-4
BUSINESS FAILURES (11/29)	460	456	39
REAL ESTATE LOANS (11/27) billions	$395.7	$395.9	2
MONEY SUPPLY, M2 (11/25) billions	$3,404.4	$3,401.3r	2
INITIAL CLAIMS, UNEMPLOYMENT (11/23) thous	471	414r	8

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Dun Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally justs data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Chan year a
BUSINESS WEEK PRODUCTION INDEX (Nov.)	177.7	179.8r	(-
BUSINESS WEEK LEADING INDEX (Nov.)	206.8	207.5r	(
EMPLOYMENT, CIVILIAN (Nov.) millions	116.8	117.0	-(
UNEMPLOYMENT RATE, CIVILIAN (Nov.)	6.8%	6.8%	1

Sources: BW, CIBCR, BLS

MONETARY INDICATORS

	Latest week	Week ago	% Char year a
MONEY SUPPLY, M1 (11/25)	$890.3	$888.8	7
BANKS' BUSINESS LOANS (11/27)	294.5	295.2r	9
FREE RESERVES (11/27)	832r	802	4
NONFINANCIAL COMMERCIAL PAPER (11/27)	134.1	134.6	9

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed fo two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Y a
FEDERAL FUNDS (12/10)	4.40%	4.86%	7.25
PRIME (12/11)	7.50	7.50	10.00
COMMERCIAL PAPER 3-MONTH (12/10)	4.63	4.91	7.48
CERTIFICATES OF DEPOSIT 3-MONTH (12/11)	4.46	4.82	7.54
EURODOLLAR 3-MONTH (12/7)	4.80	4.90	8.0

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipme
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

A Few Examples Of What's Being Made In Mexico Today.

BANCA SERFIN

Investing in Mexico is truly a money-making proposition.

Just ask a few of your competitors who have. Fortune 1000 companies in the appliance, electronic and automotive industries, to cite a few examples.

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So much so, in fact, that almost a full 65 percent of foreign capital invested in Mexico has come from corporations in the United States.

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For more information on investing in Mexico, call toll-free 1-800-336-7330 (U.S.); 1-800-336-6899 (Canada).

4A-CA

Christopher Columbus

This is a tale of a man and a city. Because it's in Genoa, the capital of the Italian Riviera, that Christopher Columbus was born. Now, 500 years after he made history, Italy is welcoming him back home with a world - class celebration. From May 15th to August 15th 1992, Genoa will host the International Specialized Exhibition "Christopher Columbus: ships and the sea". Two fascinating themes, navigation and the sea, will be presented by many participating countries bringing together technology, ecology and culture into one spectacular vision. But there are more reasons to go to Genoa. The Exhibition will coincide with the rejuvenation of the historical city center, based on a vast project by Genoa - born Renzo Piano, one of the world's leading architects. Investing in the city's future, the restoration will give new life to the Old Harbour docks and warehouses, to which major new permanent facilities will be added. In particular, a number of important international meetings - some of them sponsored by the United Nations - will be held in the new Conference Cen-

I'M TO GE

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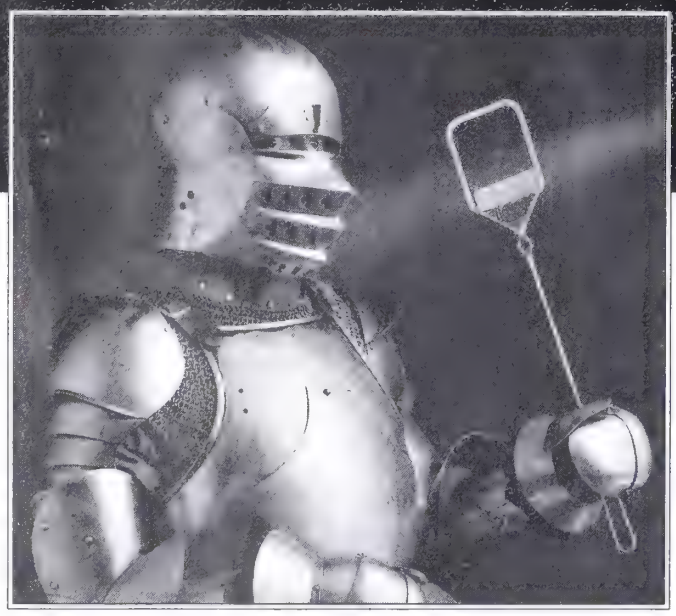
ESPOSIZIONE DI GENOVA

THE FUTURE OF THE SEA PASSES THROUGH GENOA.

Ever Get The Feeling You're Paying For More Protection Than You Need?



That's what happened to many of the Pest Control Operators of California.

Their "boiler plate" property/liability policy had them paying the same premium rate as some of the biggest crop dusting operations, even though they didn't have the same kinds of risks.

They came to us for a solution.

Along with their insurance broker, we rolled up our sleeves, studied their industry and identified the risk differences within the pest control business. We then built tailored coverages, services and rates to fit their specific needs.

Are they saving money? A lot. Plus we showed them how to avoid risks and minimize accident costs, which led to a substantial refund on their premiums at the end of the year. And now we're working as a team on their workers compensation insurance, too.

This is just one example of how our customer-focused property/liability and workers compensation plans are helping to control insurance costs.

For more examples, call your independent agent or broker, or our CEO, Bob Puccinelli, directly at (415) 627-5331.

Because if you're not careful, you could be paying for risks you're not even taking.

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Readers Report

TOUGH TALK ABOUT TOUGH CEOs

In your story "Tough times, tough bosses" (Cover Story, Nov. 25), it's interesting that the seven tough bosses for whom you listed the data were responsible for eliminating 72,565 jobs. While some of this may make their companies better competitors, a lot of the changes are the sort of short-range quick fixes designed to produce the "nice boost in profits" that are the basis for fat bonuses for these bosses before they move on to "fix" other companies.

When Norman Blake (now CEO of USF&G) was at Heller, he dismantled this country's only coast-to-coast network of lending offices providing working capital for small, growing companies, which are the nation's greatest source of jobs. I ran the Boston office, with a total portfolio of $20 million, not even up to Norman's minimum for a single loan. But we helped many small companies get started and in the process, we made an aftertax profit of more than 3% on assets, for which a bank would eat its heart out.

Henry Thornton
President
Southern Berkshire Investment Corp.
Sheffield, Mass.

The "new" CEOs profiled are rediscovering that getting back to basics is the key to delivering quick results while rebuilding for long-term success.

Once the shock of slashing and restructuring is complete, the boss must fix on investing in the people in the leaner organization and establish a sense of employee ownership in the ongoing change process. The ultimate winners will be the executives who understand the nuances of getting their people to work with them, rather than for them.

John M. Bondur
Senior Vice-President
Handy HRM Corp.
New York

Any fool can fire thousands of employees who will pay the price by having their bank accounts disappear along with their homes. The "tough" CEOs, of course, will continue to draw their multimillion-dollar salaries and perks. If this article represents Corporate America's thinking, why does anyone wonder at our failures.

Stuart Simon
President
Litheo Inc.
Culver City, Calif.

Formula for toughness:
Laying off as many workers as possible + very little imagination, if any + increasing own salary and bonus = most U. S. CEOs.

E. Rosario
Fairless Hills, Pa.

It's hard for me to imagine how we will ever catch up if one of the chief "talents" of our best CEOs is firing people!

Dan Coggin
Richmond, Va.

WHY NURSING SCHOOLS ARE CRYING FOR STUDENTS

Maybe your columnist, Gary Becker, could enlighten the nurses I work with as to how "the law of supply and demand" has enriched their lives ("Working women's staunchest allies: supply and demand," Economic Viewpoint, Dec. 2). It must be related to providing them with sicker patients, more technology and paperwork to deal with, and public anger over wasted health care spending. Add in the possibility of contracting infectious diseases from patients and it's easy to understand why nursing schools are crying for students to fill their classrooms. What about that "law of supply and demand"?

Lisa Wiethorn
Troy, Mich.

NO EASY ANSWER FOR PATENT PROBLEMS

Changing from the "first to invent" to the "first to file" system isn't going to solve the American patent system's problems, nor is it going to change the philosophy of the U. S. companies pursuing new technology and patents ("Is it time to reinvent the patent system?" Legal Affairs, Dec. 2). A very small per-

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USX gave NEW MEANING

to the phrase *divide and conquer*

They DIVIDED their stock in

TWO, which helped CONQUER

a *very* DIFFICULT PROBLEM

When U.S. Steel acquired the rathon Oil Company and Texas Oil & s, the resulting corporation was rechris-ed USX.

Diversified, to be sure. And yet, it ved to be a puzzle for many equity investors well as analysts who tend to follow and rec-mend individual industries.

A STOCK PLAN WITH A SPLIT-PERSONALITY.

USX chose to solve this dilemma by rking with Lehman Brothers to create a rer distinction in the financial community ween its steel and energy businesses. ich, in turn, would provide "pure play" estment opportunities.

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A SUM OF PARTS GREATER THAN THE WHOLE.

As a result, shareholders could retain equity in one or both of the businesses. The energy and steel shares began to trade separately on the NYSE. New investors with specialized interests warmed to USX. And the aggregate value of the stocks appreciated significantly.

The USX deal is notable for size and complexity alone. More to the point, it underscores our conviction that all clients are one-of-a-kind, requiring customized approaches.

Which has not only led us to organize into industry *and* product groups, but to populate the firm with people who actually talk to each other. A practice which ensures that a client will get the best solution, rather than the solution with which one individual is best acquainted.

If your company has a problem or opportunity that could use that sort of thinking, we'd like to be involved.

LEHMAN BROTHERS

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[illegible], less than a fraction of one percent of the patents granted or filed, end up in the long interference disputes based upon the first-to-invent system.

The problems stem from U. S. companies and Congress not putting as much money into research and development. And the government hasn't given the U. S. Patent & Trademark Office the budget and autonomy needed to function in today's international climate.

Changes to the U. S. patent laws are necessary, but major changes by the executive and legislative branches of our government are needed. One only need look at how the Patent & Trademark Office's budget is funded to see the problems. These problems go back to the days when Senator John McClellan was chairman of the patent, trademark, and copyright subcommittee of the Senate.

Anthony P. DeLio
New Haven, Conn.

AMERICA WEST: ANOTHER READING OF THE RANK AND FILE

Your story "Mutiny is in the air at America West" (Top of the News, Nov. 25) just doesn't fly. It is hard to understand how, based on conversations with a handful of renegade self-appointed employee representatives, your reporter can conclude that there has been a marked shift in sentiment at America West Airlines or that goodwill toward management has been dwindling. It is especially perplexing when one learns that America West's official employee group, composed of representatives elected by their peers, told your reporter that they had just polled their members and that Michael Conway received a strong vote of confidence.

America West's employees feel that BUSINESS WEEK has done them a great disservice in jumping at the bait dangled by this small dissident group. Calls and letters have poured into Michael Conway's office to tell him so, and directors of the company have heard this as well.

America West is proud of its employees' spirit—a spirit that is very much alive and well today. Just three weeks ago, management asked for employee volunteers to help kick off its new Columbus (Ohio) route—more than 500 America West employees volunteered to work without pay. How many other companies in this country do you think could equal that response? Certainly none whose morale was not sky hig

Mark De Miche
President, Arizona Public Service C
Member, Board of Directo
America West Airlines In
Phoen

Editor's note: Our story cited the su port of the Employee Reorganizati Panel, the group referred to above.

I'm sure you are aware that a fe vocal people can give the impressi of representing the majority, when fact, they are simply the noisiest. Mo employees are loyal to Mike Conway a are doing their job well to share in o future success.

Carol Brig
Dept. Secretary, Passenger Refun
America West Airlin
Phoen

HONDA'S ACCORD: NO QUESTION IT'S AMERICAN

It was surprising to realize ho strongly nationalism is growing in t U. S. If the same arguments BUSINE WEEK uses to blame Honda's Accord not American is used in Latin Ameri

gainst U. S. companies, things would be ery tough for them ("Honda: Is it an merican car?," Cover Story, Nov. 18). onda plants in the U. S. are American ecause they are under U. S. laws, em- oy Americans as laborers, and pay tax- s to Uncle Sam. They mean foreign in- estment at a moment when every ountry wants it. They mean better qual- y and cheaper prices to customers, too. Do not forget, America: "Under capi- lism, the customer is king," as Adam mith said. Is America going to close its conomy while everybody in the world ven the previous socialist countries) ants to open theirs?

Saulo A. Ignácio
Ribeirão, Prêto, Brazil

OES SOVIET AID DESERVE O BE A U.S. PRIORITY?

Aside from the excellent points made by Gary Becker in "The last thing e Soviets need is a foreign-aid pack- ge" (Economic Viewpoint, Nov. 4), it ecomes increasingly difficult to justify the American tax-paying public a rge foreign-aid package when the U. S. ces very tangible problems of a reces- on, unemployment, illiteracy, homeless- ss, continued drug warfare, and a host other issues. Additionally, the U. S. policy of "buying friends abroad" often backfires. Witness the thanks of countries such as Jordan, which received as much as $55 million in 1989 and later backed Saddam Hussein in the Persian Gulf conflict. It would behoove the makers of our foreign policy to recall that "charity begins at home."

J. A. Diederich
Columbus, Ohio

Many American proponents of aid to the Soviet Union wholeheartedly agree that aid will only be effective when it is linked to true market reform. However, without evidence to the contrary, such proponents believe that aid is necessary for there to even be a chance of successful reform and recovery. Thus, the form of assistance is a worthy bone of contention; its existence should not be.

Ruth Judson
Gary Mueller
Cambridge, Mass.

CORRECTIONS & CLARIFICATIONS

In the directory of BUSINESS WEEK's Corporate Elite (Cover Story, Nov. 25), we included some incorrect data on George M. Sherman, Danaher Corp.'s CEO. His birth date was Aug. 6, 1941; his career path was manufacturing/production. Also, the directory should have included NCR Corp.'s Gilbert P. Williamson, who became CEO as of Sept. 19.

GUESS WHO OWNS COACH LEATHER

The story on "Value marketing" (Cover Story, Nov. 11) quotes a woman who rebukes her own choice of a costly Coach handbag. Her vow to "never do it again" implies that this manufacturer's prices are not justified by the quality of the product. On the same page your article goes on to praise Sara Lee for knowing how to deliver value while retaining a healthy profit margin. Surprise! Guess who owns Coach leatherware? Oh, and by the way, my Coach briefcase has outlasted others (of half the price) 3 to 1. I guess value is in the eyes of the consumer.

Mitchell Jureckson
Lancaster, Pa.

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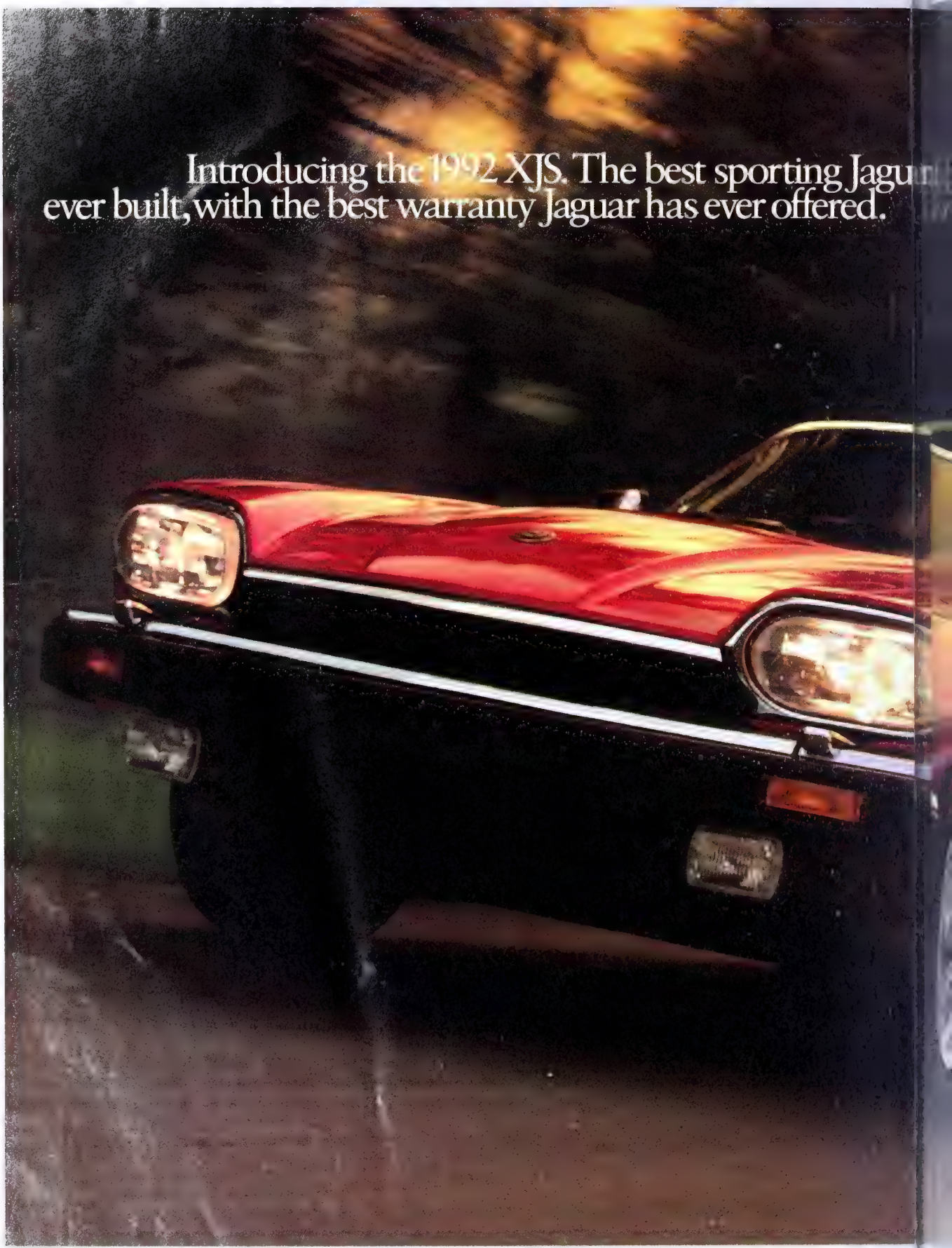

A B L E N D I N G O F

Some say it was the 1939 SS-100. Others are partial to the 1954 XK-120. And, of course, a most compelling argument could be made for the celebrated 1963 E-type. But the time has come to put all such arguments aside.

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For your nearest dealer—who can provide more information on Jaguar's limited warranty—call 1-800-4-JAGUAR.

J A G U A R

T A N D M A C H I N E

THE MAN TO SEE: EDWARD BENNETT WILLIAMS—ULTIMATE INSIDER; LEGENDARY TRIAL LAWYER
By Evan Thomas
Simon & Schuster • 587pp • $27.50

'THE IDEAL CLIENT IS A RICH MAN WHO IS SCARED'

Just months before Edward Bennett Williams' death in 1988, he lunched with Washington superlawyers Robert Strauss and Clark Clifford. The meeting was a sad affair, as the famed defense lawyer's friends realized that he was losing his long fight with cancer.

What Strauss and Clifford didn't know was that their days in Washington's power circles were ending, too. Strauss, once Democratic National Committee chairman, would become ambassador to the Soviet Union—in time to see the post rendered irrelevant by the nation's splintering. Clifford's reputation would be tarnished in the Bank of Credit & Commerce International scandal.

The death of Williams, the man the moneyed and powerful paid $1,000 an hour to fix their problems, brought down the curtain on an era in Washington. It stretched from the 1940s and America's ascendancy to superpower status to the start of the country's economic decline. It was a time when power brokers such as Williams could solve a legal problem with a discreet call to the Justice Dept.

When Williams hit town in 1941, from Irish working-class East Hartford, Conn., he had $12 in his pocket. At his death, he was worth more than $100 million and had owned both the Washington Redskins and Baltimore Orioles. He had represented clients ranging from Senator Joseph R. McCarthy to junk-bond maestro Michael R. Milken, finding time also to counsel *The Washington Post* to publish the Pentagon Papers and tycoon Marvin Davis on his purchase of Twentieth Century-Fox Film Corp.

Evan Thomas, *Newsweek*'s Washington bureau chief, has chronicled th headline-filled life in a richly anecdot biography, *The Man to See*. He has n overlooked Williams' dark side—th drinking, the partying with the den monde, and the sometimes questionab ethics. The only disappointment is h failure to probe contradictions in W liams' character more deeply. For all th hard living, Williams was a devout Cat olic—and devoted to his family. He w as close to power as anyone in Washin ton, yet never held a government pos He seemed as comfortable defendi mafiosi as representing the Catho Church. Thomas writes of his "Iri Catholic's deep pessimism about the e sential sinfulness of man and an equal great faith in the power of redemption"

Williams started out defending insu ers in streetcar-injury cases for the la firm of Hogan & Hartson. But what e cited him were court-appointed crimin cases, even though defending loca charged with crimes of passion w hardly lucrative.

Striking out on his own, he was so defending the Atlas Club, a raffi Washington hangout, in a congression probe of gaming clubs. Among the de patrons was blue-blooded journalist B

WHO'S MADE THE TOP 10 IN EQUITY RESEARCH FOR 20 YEARS?

adlee, who would be-
me one of his closest
ends as well as execu-
e editor of *The Wash-
gton Post*. The turning
int for Williams came in
50, when Joe McCarthy,
th whom he shared a
staste for Harvard-edu-
ted WASPs, hired him to
ght a defamation suit
ought by columnist
rew Pearson. Four
ars later, Williams sat
McCarthy's side as the
nate censured him.
Although McCarthy's
reer was in decline, Wil-
ms' was about to soar.
ewspapers praised his
ol-headed work for the hot-headed sen-
or, and famous clients started rolling
: underworld boss Frank Costello,
nion leader Jimmy Hoffa, and flamboy-
nt Representative Adam Clayton Pow-
l Jr. In time, Williams would echo the
ords of his first wife's grandfather,
e founder of Hogan & Hartson: "The
eal client is a rich man who is scared."
In helping these men, Williams sealed
s reputation as the top criminal lawyer
f his generation. He garnered power as
ell as publicity. During the Kennedy
era, his friendship with Clifford, the New Dealer who later became Lyndon Johnson's Defense Secretary, gave him an entrée. Clifford referred clients to Williams when they found themselves ensnared in white-collar prosecutions.

Williams' reputation as a fixer grew in the 1960s. For Jack Kennedy he checked out Roy Cohn, under investigation by brother Bobby's Justice Dept. He represented Johnson aide Bobby Baker in an influence-peddling trial. On Williams' advice, Baker took the Fifth Amendment 120 times. Williams would advise clients to stick to their stories and not cut deals with prosecutors who divided defendants by granting immunity to lesser figures for testimony. "You can hang together," he'd say. "Or we can hang together."

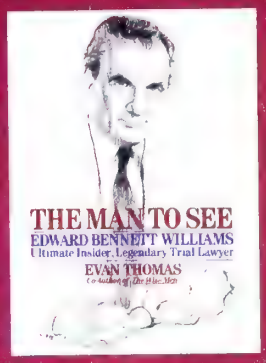
By the 1980s, Williams had power, prestige, and money. His clients now came from the business world: Gulf & Western Corp.'s Charles Bluhdorn, whom he successfully defended in a securities-fraud investigation, and Victor Posner, the Miami Beach raider who pleaded guilty to tax fraud but avoided prison.

And, of course, there was Williams' last client, Michael Milken. What might have been, had Williams lived? Would he have counseled Milken to fight rather than plead guilty? No one knows. But what's certain, based on the career Thomas has so ably sketched, is that it would have been a hell of a finale.

BY TIM SMART

Washington Correspondent Smart reports on legal affairs.

From Joe McCarthy to Mike Milken, the powerful turned to Williams—at fees up to $1,000 an hour



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More important, the strength of DLJ's equity and credit research has helped make the firm consistently and strongly profitable despite the turbulence in recent years in the securities industry. In fact, DLJ has grown to become a major force in both investment and merchant banking and in fixed-income markets.

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To learn more about the strength in our numbers, please write to Richard H. Jenrette, Chairman and CEO, or Joseph J. Melone, President and COO, at The Equitable, 787 Seventh Avenue, Dept. A, New York, NY 10019.

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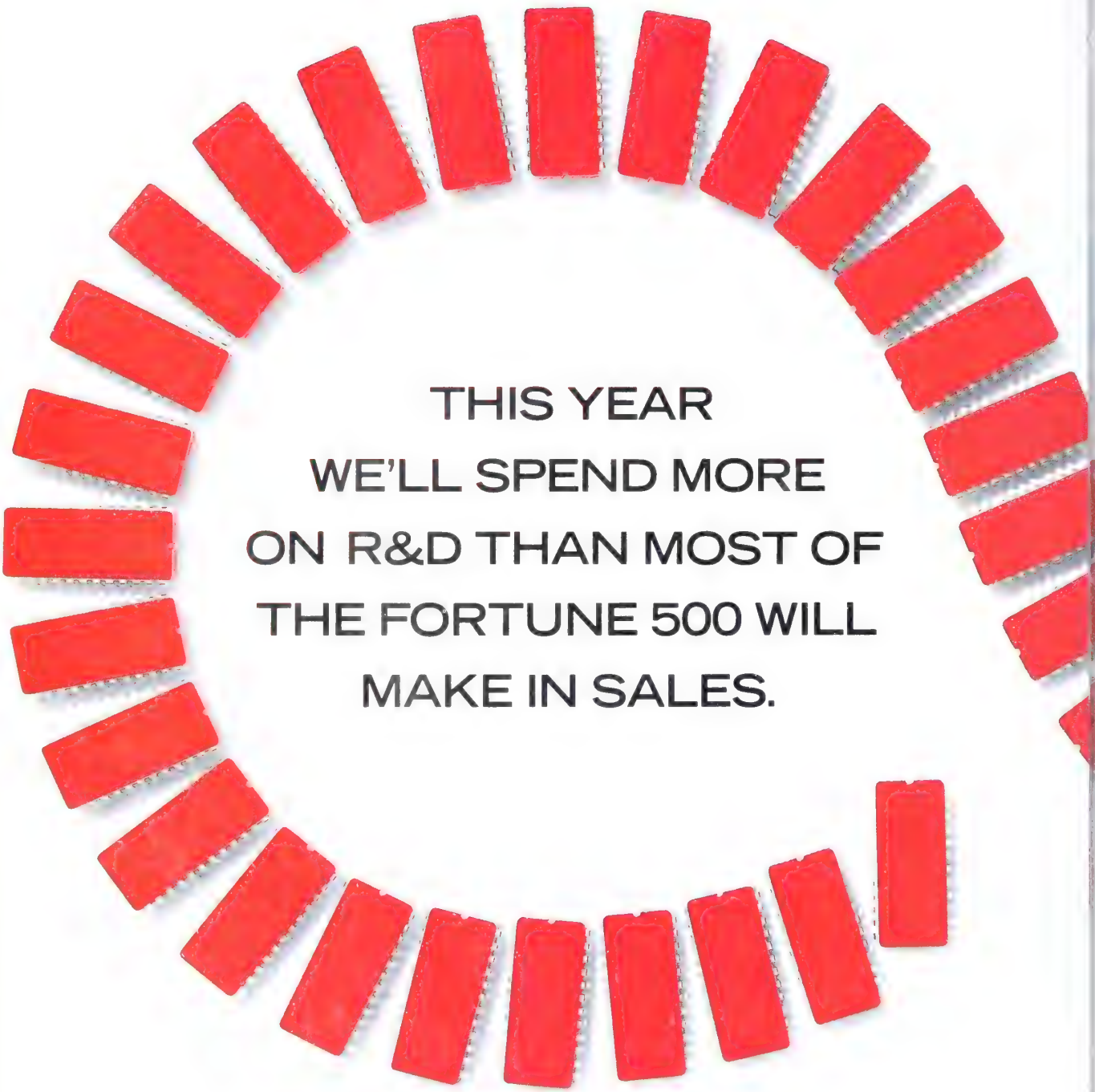

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OH, FOR THE REAGAN YEARS—WHEN GROWTH WAS GROWTH

BY PAUL CRAIG ROBERTS

Under Bush, the economy has not grown in three years, and unemployment is at 6.8% and rising. But Reagan's expansion outdid the performances of Carter, Ford, Nixon, and Eisenhower

According to anti-Reagan pundits, the "Excessive Eighties" were an awful time. But compared with today, life was wonderful. Judging by the mounting pressure on President George Bush, people are demanding the return of Reagan's progrowth policies.

The reasons are not difficult to fathom. Low unemployment and rising incomes are not what the electorate considers excesses. Under Bush, the economy has not grown in three years, and not even optimistic forecasters expect much improvement in 1992. When the economy doesn't grow, neither do jobs or incomes, and debts become a burden. Bush has taken the unemployment rate from 5.2%, where Reagan left it, to 6.8% and rising. Real median family income rose throughout the long Reagan expansion but has fallen under Bush.

To illustrate the excesses of the 1980s, critics focus on the growth of debt. But debt is what finances growth in the economy, jobs, and incomes. (This is especially true in the U.S., where an anticapital tax system subjects savings to multiple taxation.) Real economic growth averaged 4% during the Reagan expansion, far outdistancing that under Presidents Carter, Ford, Nixon, and Eisenhower and putting the Reagan expansion in the same league with the strong growth of the 1960s.

However, unlike the expansion during the 1960s, economic growth in the 1980s did not have to be paid for with a rising rate of inflation. When Ronald Reagan entered office, the consumer price index stood at 12.5%; when he left, it was 4.4%. Inflation actually fell during the first four years of the Reagan expansion and averaged 3.9% over the 1983-89 period—half the rate of the 1970s.

NEW JOBS. The growth in debt during the 1980s financed the creation of 20 million new jobs, putting to shame the performance of Europe and Japan. Real median family income, which had stagnated in the 1970s, rose $4,000 during the Reagan expansion.

The growth in debt had no adverse effects on corporate profits or interest rates. Corporate profits before tax almost doubled from 1982 to 1988, and interest rates collapsed. The prime rate, which averaged 18.9% in 1981, fell to 9.3% in 1988. The interest rate on three-month Treasury bills fell from 14% in 1981 to 6.7% in 1988, and the rate on 10-year Treasury bonds fell from 13.9% to 8.9%.

Thus, we had an historically long economic expansion accompanied by 20 million new jobs, a tripling of manufacturing productivity growth, rising real family incomes, falling or stable inflation, and collapsing interest rates.

This performance is "excessive" only becaus every "blue-chip" economic forecaster and tw bit pundit in the country said it could not b done.

Bush's economic-growth record is so bad averaging 0.1% annually—that the Presidei with the second-worst record in the postw era, Eisenhower, did 19 times better. Carte did 27 times better, Ford 22 times better, ar Nixon 25 times better. Even when the Reag expansion is weighted down with the 1981-8 Volcker recession, Reagan did 29 times bette

DISMAL FAILURE. Little wonder that Bush economic team is hiding its own dismal failu by blaming an "excessive" growth in emplo ment and income in the 1980s. This dem goguery pleases liberals who hate Reaga but it doesn't fool the electorate, which is d manding that Bush stop his systematic d struction of the Reagan economy.

Bush has no economic achievements and i numerable failures. He has taken no steps stop the dangerous slide in real estate va ues—thus maximizing the cost of the taxpay bailout of savings and loan association ar bank depositors. Real estate values could ha been stabilized, and many thrifts and ban saved, for a small fraction of the cost of th bailout. The tax cost of returning the tax ar depreciation advantages, which were foolish yanked away by the Tax Reform Act of 19 in the midst of a real estate correction, is i finitesimal compared with the ongoing d struction of wealth and financial institution However, James A. Baker III and Richard Darman, the bigwigs of the Bush Administr tion, oppose any undoing of their handiwo from the days when together they were ru ning the Treasury Dept.

Bush raised taxes, and the budget defic has jumped from $150 billion, where Reag left it, to more than $350 billion. The 19 budget agreement—centerpiece of the Admi istration's economic policy—has been follow by an increase in projected red ink th dwarfs in magnitude the deficit effect of t 1981 Reagan tax cut. Moreover, the Congre sional Budget Office now forecasts $300 billi deficits as far as the eye can see. Unlike t economic boom that Reagan gave us, we ha nothing to show or to expect from Bush's u precedented increase in the public debt—e cept higher taxes.

During the three years that Bush has oc pied the White House, the only growth h been in the deficit, taxes, regulation, and u employment. It is a scary indication of o future that the government and the pund see this dismal failure as moderation and r gard the successes of the 1980s as excesse

PAUL CRAIG ROBERTS IS CHAIRMAN OF THE INSTITUTE FOR POLITICAL ECONOMY IN WASHINGTON

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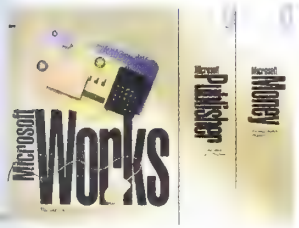

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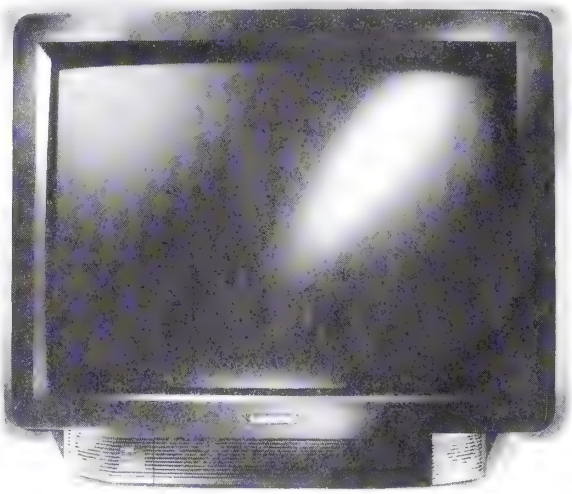

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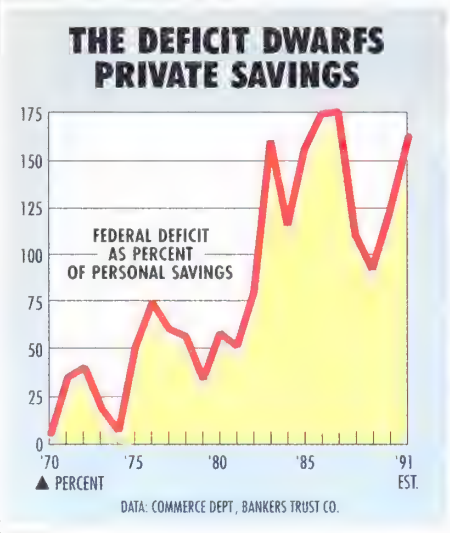
BY GENE KORETZ

WHY LONG RATES ARE RESISTING THE PULL OF ECONOMIC GRAVITY

The nation's economic policymakers are frustrated, to say the least. The Federal Reserve has pushed short-term interest rates down to their lowest levels in two decades, the economy seems comatose, and inflation is subsiding. Yet long-term rates, which directly affect such critical sectors as housing, have stayed relatively high and have risen in real terms as inflation has slowed.

The most common explanation of stubbornly high long-term yields is psychological: Investors in inflation-sensitive securities are becoming more fearful that Congress and the Administration will resort to overstimulus to ensure victory at the polls next year. But while he concedes that market psychology is important, economist Alan C. Lerner of Bankers Trust Co. thinks long rates are being held up by more than investor fears. "The combination of an exploding federal deficit combined with weak private savings," he says, "implies that government borrowing is crowding out private borrowers."



To be sure, most economists question the "crowding out" thesis—particularly since the federal deficit as a percent of gross national product has declined from its level in the mid-1980s. But Lerner argues that the best way to gauge the potential impact of the deficit on capital markets is to relate the red ink directly to personal savings rather than GNP.

"Such savings, which have been historically low since the mid-1980s," he says, "are the principal source of private domestic funds available for financing public and private borrowing." (Savings by business have also slowed recently, but are smaller and more affected by the business cycle.)

The past two decades, notes Lerner, have seen a "relentless upward march of the federal deficit as a percentage of personal savings—from 5% in 1970 to an estimated 162% this year." The effect of this trend on capital markets, he notes, was muted in the mid-1980s because the U. S. was able to attract large pools of savings from abroad. But now that developments overseas have stanched the flow of foreign capital into the U. S., Lerner contends that "crowding out is back with a vengeance."

If Lerner is right, government policymakers face a daunting task: They must not only find a way to stimulate the economy while calming inflationary fears but also take action to bolster household savings and reduce the deficit over time. Until they do, warns Lerner, "long-term interest rates are likely to remain relatively high."

FOREIGN CAPITAL IS DOING MORE EBBING THAN FLOWING

Alan Lerner isn't alone in asserting the economy is undergoing a credit squeeze. Economic consultant Sam Nakagama points to a sharp slowdown in the nation's net inflow of foreign capital—from $166.9 billion in 1987 to an actual outflow at a $52.3 billion annual rate in the first half of this year. The main cause, he says, has been a massive reversal in Japan's and Germany's capital flows, from a combined outflow of $80 billion in 1990 to an inflow at a $19.4 billion pace this year. In this situation, says Nakagama, "tax cuts that lead to rising deficits may be of little avail."

FOR MANUFACTURERS, THE GRASS IS FAR GREENER OVERSEAS

American manufacturers with factories or sales subsidiaries overseas are outperforming their domestic counterparts. A new Conference Board study of more than 1,500 companies reports that U. S. multinationals during the 1980s posted faster growth than domestics in 19 out of 20 major industry groups, and higher earnings in 17.

The study also found that the number of U. S. manufacturers at home and abroad participating in major industrial markets shrank significantly—part of an apparent world trend toward great concentration in product markets. Th finding may have important implicatio for trade policy, says Conference Boa Economist Gail D. Fosler. It sugges that "global markets may be less pure competitive than policymakers assur and increasingly reflect the strategic tions of a few large producers."

HOW IMPORTS HAVE DEPRESSED U.S. WORKERS' WAGES

Critics of America's liberal trade a immigration policies have often a gued that they have depressed U. wages. Now, in a new National Bure of Economic Research working pap economists George J. Borjas, Richard Freeman, and Lawrence F. Katz pr vide some hard estimates of such fects. Their study focuses on the wi ening gap in earnings between l ser-educated and higher-educated wor ers during the 1980s—a period duri which college graduates' wages rose real terms while real earnings of less educated workers either failed to gr or actually declined.

The authors' analysis of the labor co tent of imports that substituted or co peted with the products of U. S. worke indicates that by the mid-1980s, t trade deficit was increasing the "impli it" labor supply of the manufacturi sector by about 6% annually. As a resu they say, the 11% decline in the wag of high school graduates relative to c lege graduates between 1980 and 19 was nearly a third larger than it wou otherwise have been.

The biggest part of the trade defic however, was concentrated in industri that intensively employ high scho dropouts. Thus, its impact on the ear ings of U. S. dropouts was even greate as was the impact of the wave of ne immigrants in the 1980s, which includ relatively few high school graduates b many poorly educated workers.

By 1988, the researchers estimate th the combination of the trade deficit a continued high immigration (includi illegals) had boosted the implicit supp of high school dropouts by 30%. The two factors accounted for some 30% 50% of the 10 percentage-point decline dropout wages relative to high scho and college grads in the 1980-88 perio

In short, by augmenting the effecti supply of less educated workers in t 1980s, imports and increased immigrati helped to depress their wages and th widen the earnings gap between les skilled and more-skilled Americans.

EMBER 23, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

OW MUCH MORE AN THE ECONOMY TAKE?

s the U.S. in the longest recession in the postwar era? Despite two quarters of tepid growth, the economy now faces that sobering question.

ading hopes for a sustainable recovery took a body v in early December. Washington's revisions to third-rter gross domestic product and a recession-size drop November employment raised fears that a new period economic contraction is unfolding.

The latest job numbers show that net payroll employment fell by 241,000 workers last month and that the percentage of hiring industries is rapidly shrinking (chart). The November job loss was on a par with the worst posted during the winter months of the recession, and it all but wiped out the few gains made since April.

For an economy desperately king growth in jobs and incomes to get consumer nding back on track, the report was shattering. No overy can proceed against job losses of that size. And e after wave of corporate layoff announcements as-es that more cuts are on the way (page 24).

he government's GDP revisions were also a stunner. y showed that final sales fell last quarter, that inven- growth more than accounted for the economy's ns, and that consumers' real income didn't grow at Against that backdrop, the economy faces tough lding this winter.

RECASTS O FROM LUM TO LUMMER

Now, economists are making some revisions—to their forecasts. They have cut their average projection for the current-quarter annual growth rate by more than , from 2.8% in October to 1.3% in December, accord- to *Blue Chip Economic Indicators*, a monthly sur- of 50 forecasters. They have trimmed their first-rter growth projections from 2.9% to 1.8%.

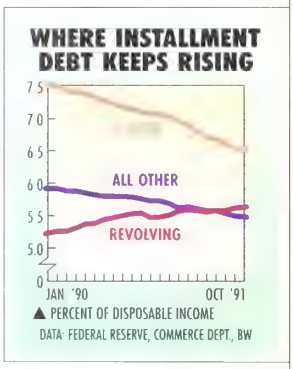
hat still may be too optimistic. Most measures of nomic performance began the fourth quarter below r third-quarter levels, strongly suggesting a drop in quarter's real GDP. *Blue Chip* reports that an in-asing number of forecasters predict outright declines oth quarters. Also, the latest survey was taken dur- the GDP revisions and before the dismal job data, so projections are likely to go lower.

he latest data also got the attention of the Federal serve. On Dec. 6, it lowered its target for the federal funds rate by a quarter point, to 4½%. That was the 14th cut since the recession began last July, when the rate stood at 8¼%. Since its peak at 9¾% in the spring of 1989, the rate has come down by more than half.

And there is more to come. In the past five recessions—counting the back-to-back downturns in 1980 and 1981-82 as one—the federal funds rate dropped by an average of two-thirds. Also, the real funds rate, adjusted for inflation, remains higher than at its trough in past recessions, when it has typically turned negative.

Two factors suggest that the Fed will ease policy further: The outlook for inflation amid new economic weakness is brighter, and the increasingly pro-growth mix on the Fed's policy committee imparts a greater bias toward ease. The central bank may well decide to shave another quarter point off the federal funds rate by year-end at its policy meeting on Dec. 17.

If so, expect a half-point cut in the discount rate, to 4%. That move will allow banks to cut the prime rate by a half point to 7%, the lowest since 1977, and it will put the discount rate at the lowest point since 1967.



Fed Chairman Alan Greenspan's remarks on Dec. 6 made it clear that he is still concerned about the growth-depressing combination of heavy debt, bad loans, and lending caution by banks. A month ago, Greenspan likened these problems to a "50-mph headwind" buffeting the economy. In the wake of the latest data, Fed Vice-Chairman David W. Mullins Jr. in a speech on Dec. 10 upped the speed to 75 mph.

LOWER RATES WILL FREE UP MORE CASH

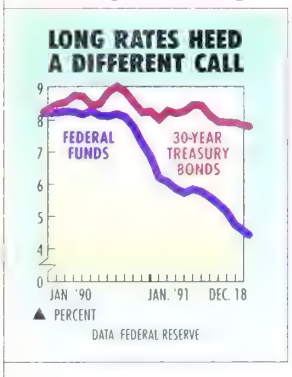
Clearly, the Fed is planting the seeds of a true recovery, although they may not sprout until next spring because of the usual lags. The M2 money supply picked up in both October and November, finally showing the first signs of responding to past Fed easing.

Also, lower rates are slowly allowing consumers to reliquify their debt-laden financial positions. That puts more income in people's pockets. By one estimate, mortgage refinancing alone will add some $50 billion, at an annual rate, to consumer spending by spring. And except for revolving credit, consumers continue to lighten their burden of installment debt (chart).

Installment credit rose slightly in October, up $802 million, after a smaller increase in September. However,

ERIC HOFFMAN/BW

the advance probably means that consumers are paying off their debt at an even slower pace than they are taking on new credit. Households are having a hard time unloading their old IOU's, and that will drag out the reliquification process.



During the past year, installment debt is down by 0.7%, and most types are falling as a percentage of disposable income—a typical recession pattern. The only exception is revolving credit. That's a red flag that consumers may be using their credit cards as a last-ditch source of funds.

Another problem: High long-term interest rates are holding up progress on housing and consumer finances. Because of the bond market's worries about inflation and Treasury financing, long rates are still lofty compared with the Fed-engineered drop in short-term rates (chart).

However, the threat of more recession makes deflation a greater risk than inflation, so price growth should slow further. Also, based on comments by Treasury Secretary Nicholas J. Brady on Dec. 5, the Treasury may begin to sell fewer 30-year bonds in an effort to shorten its maturities and take some upward pressure off rates. All this should allow long rates to move lower.

FACTORIES FACE A BLEAK WINTER

Lower rates will eventually work their magic, but for now, the combination of weak income growth, declining final demand, and faster-than-desired growth in inventories is a killer. It sets up the classic recession cycle, as losses in output and employment further depress income and spending.

The November job report was, at least, a mitigated disaster. The Labor Dept. reported some onetime seasonal-adjustment problems that made the decline look wors than reported. And construction employment, whic dropped by 95,000, was depressed by snowstorms.

But even accounting for all that, the overall losses fa exceeded the expectations of most economists. Nonfarı employment is now only 93,000 higher than the rece sion's low point in April. If health care jobs had nc grown by an impressive 256,000 since April, employmer in November would stand at a new cyclical low.

Retail jobs were especially scarce last month. After seasonal adjustment, they fell by 111,000, as stores fearing poor holiday sales added far fewer workers than usual.

Manufacturers also trimmed their November payrolls, cutting 33,000 workers after similar-size losses in September and October. The factory workweek held steady, at 40.9 hours, but that's down from August and September. All this mean that industrial production went nowhere for the fourt consecutive month.

Outright declines in factory output are a good bet a winter wears on. Carmakers have already slashed plan for first-quarter output, and falling auto production a ways has a broad impact on Detroit's supplier industries

But problems in manufacturing go beyond Detroi Unfilled orders plunged in both September and Octobe (chart). So companies will have to depend on fresh de mand to keep their production lines running at a tim when new orders are slowing. If manufacturing goe under again, it will take the rest of the economy with it

The record length of postwar recessions is 16 months a span reached in both the 1973-75 and the 1981-82 dowr turns. If the economy is indeed headed back into th soup, November was month number 16—and counting.

THE WEEK AHEAD

INDUSTRIAL PRODUCTION

Monday, Dec. 16, 9:15 a.m.

Output by the nation's factories, mines, and utilities probably dropped by about 0.1% in November, according to economists surveyed by MMS International, a division of McGraw-Hill Inc. The loss is suggested by the drop in factory jobs and a decline in the National Association of Purchasing Management's index of industrial activity. A decrease in auto production will likely lead the overall drop. The expected loss in output suggests that industry used only 79.3% of capacity, down from 79.6% in October. The lack of any significant pickup in domestic demand, plus an involuntary rebuilding in inventories, is causing factories to cut their production schedules. Output was unchanged in October and was up 0.2% in September.

HOUSING STARTS

Tuesday, Dec. 17, 8:30 a.m.

Construction on new housing probably stood at an annual rate of 1.07 million in November. Starts were a bit higher in October, at a 1.1 million pace. In November, bad weather hampered homebuilding in the Midwest, but the weakness in sales elsewhere in the U. S. indicates demand for new homes remains soft.

CAPITAL SPENDING PLANS

Wednesday, Dec. 18, 8:30 a.m.

The Commerce Dept.'s first survey of spending plans for new plants and equipment for 1992 is likely to show that an gain next year will come in the secon half. Spending fundamentals, such a profits, product demand, and credi availability, are too weak to suppor much new investment in the winter o spring. In 1991, capital spending is est mated to have increased just 0.5%.

MERCHANDISE TRADE DEFICIT

Thursday, Dec. 19, 8:30 a.m.

The MMS consensus expects that th trade deficit narrowed slightly in Oct ber, to $6.6 billion, down from $6.8 bi lion in September. Exports, which wer up 3% in September, probably change little in October. Imports, up 3.2% in Sep tember, may have fallen in Octobe helped in part by declining oil prices.

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HELP NOT WANTED

OVERCAUTIOUS EMPLOYERS COULD SEND THE ECONOMY SPIRALING DOWNWARD

What does it feel like to have an economic recovery without new jobs?

That's what Americans may be finding out. Since July, nonfarm payrolls have shrunk by 30,000. Take out hiring in health care, and the rest of the economy has lost almost 200,000 jobs. And the next few months don't look much better. Many economists see only a weak rebound in employment in the first half of 1992 (chart)—one that won't be enough to bring down the unemployment rate.

What's worse, the layoffs, downsizings, and "involuntary separations" that made 1991 ghastly for many workers will continue into 1992. Many companies that have already cut jobs aren't through chopping heads. And fresh cutbacks seem to be announced almost every day. On Dec. 11, for instance, Xerox Corp. disclosed plans for reducing its work force by 2,500 by mid-1992. On the same day, TRW Inc. announced impending job cuts of 2,500 workers, in addition to divesting businesses employing 7,500 more. And IBM intends to cut 20,000 positions over the next year, the sixth such major job-cutting program at Big Blue since 1987 (page 28).

TOO PRUDENT? After the last recession ended, in November, 1982, many companies waited only a few months before starting to add workers again. But this time, most businesses intend to hold off much longer, until the recovery is stronger. Help-wanted ads are down everywhere, and executive and professional search firms report only a slight pickup in activity. Says Christopher C. Cole, vice-president for strategy and business development at toolmaker Cincinnati Milacron Inc.: "I do not look for us to be increasing employment next year—not until we see our customers in a lot stronger position than they are now."

That may well be a prudent strategy for Milacron. But too much caution on the part of employers could lead the economy into a vicious downward spiral. When companies don't see an increase in demand, they will tighten their belts another notch. The fear of more layoffs could terrify workers into pulling purse strings tighter. Indeed, one measure of consumer confidence, compiled by Plog Research, a Los Angeles market researcher, plunged from 44.6 in October to 26.3 in November.

Not all parts of the labor market are shrinking. Engineers and technicians are still in demand, depending on their sp cialty, even at companies that otherwi are paring workers. Environmental co panies intend to hire in the first half 1992, reports Management Recruite International Inc., a Cleveland sear firm. Health care, too, is still a source jobs. For example, Baxter Internation Inc., a health-care-goods company Deerfield, Ill., hired hundreds of peop

NEW ORDERS, NEW JOBS? NOT NECESSARILY. AT GE'S AEROSPACE PLANT IN A 20%, DESPITE A $145 MILLION CONTRACT TO PR

year and plans to add more in 1992. Hyatt Hotels Corp., which laid off 0 people in 1991, expects to open e hotels and hire 1,500 new workers ne coming year, says President Dar- Hartley-Leonard.

ut these companies are the excep- s in a recovery that has proved dis- sing for workers. When the 1981-82 ssion ended, hiring picked up in e industries, such as finance and ness services, almost immediately. nin six months, almost every indus- was expanding vigorously, and the nomy had added almost 900,000 jobs.

NDSTILL. This time, almost no indus- shows growth. The bloated banking, estate, and retailing fields are still racting painfully. Continuing state local budget deficits mean more re- ions in government jobs. Defense are still taking their toll across the ntry. And after a mild rebound, not a le manufacturing industry has add- nany workers since summer.

oreover, if spending falters and the economy starts to contract, retailers and manufacturers might find themselves with mountains of excess inventory. "If Christmas sales come through poorly," warns A. Gary Shilling, an economic consultant, "I think we will see more big layoffs early in 1992."

> Cincinnati Milacron won't be hiring next year—not until it sees 'customers in a lot stronger position'

Certainly, many companies intend to keep cutting costs—and jobs—even if the economy continues to recover. On Dec. 9, Denver's U. S. West Inc. unveiled plans to slash about 6,000 positions, some 9% of its total work force, over the next three years. And citing a bleak outlook for farm and construction equipment, Tenneco Inc. announced it intends to pare 4,000 jobs from its J. I. Case subsidiary by the end of 1992.

Computer companies, too, are still trying to slim down to meet the new realities of the marketplace. Besides IBM, Unisys Corp., which announced cuts in July, has eliminated 12,000 jobs, by layoffs or divestitures, since the beginning of this year and has 6,000 more to go in 1992. Analysts expect that minicomputer maker Digital Equipment Corp. will cut 6,000 jobs in the first half of 1992, in addition to the 5,700 eliminated through Sept. 30.

And corporations such as Du Pont Co. are cutting jobs to remain globally competitive. The company has eliminated 1,700 jobs out of an announced 5,500 so far, with more cuts planned for next year. Du Pont workers were recently unnerved by news of another scheme in the works to bolster the company's bottom line by as much as $2 billion over the next five years, in part by paring "unnecessary" jobs.

NO RELIEF. The shrinking defense industry is sure to bring many pink slips to workers in 1992. With business weak for both military and commercial aircraft, McDonnell Douglas Corp. expects to fire up to 6,000 employees over the next 18 months. An additional 1,700 missile and helicopter workers also will get the ax. Even mighty Boeing Co., which expects to lose about 2,500 jobs because of canceled missile programs, will have to lay off excess workers. About 7,600 additional Boeing jobs could be lost if Congress cancels the B-2 stealth bomber.

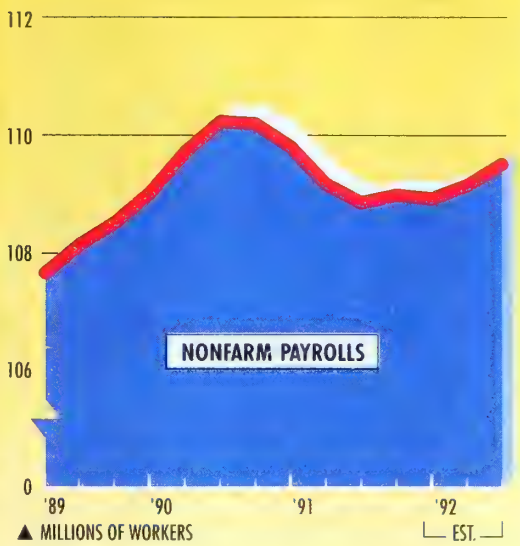
Beyond defense, most companies expect that sales will eventually pick up. Still, even new orders may not bring jobs back. In September, General Electric Aerospace reported plans to cut employment by almost 20% at its East Windsor (N. J.) plant by mid-1992. Then, on Dec. 2, GE won a $145 million contract to build two satellites for South Korea at that same plant. Good news, right? Yes, but the company doesn't plan to hire new workers. And the new order won't even boost U. S. employment at GE's contractors, since the three key suppliers are foreign.

Production of goods and services may still be able to grow again without a rebound in employment. If all the cutbacks make companies more efficient, higher productivity could mean economic growth without more jobs. Yet for millions who have lost their jobs, it would feel as if the recession never ended.

By Michael J. Mandel in New York, with Lois Therrien in Chicago, Lisa Driscoll in New Haven, Zachary Schiller in Cleveland, and Joseph Weber in Philadelphia

N.J., STAFF IS BEING CUT BY LITES FOR SOUTH KOREA

STRUGGLING TO BOUNCE BACK...



...DESPITE BIG LAYOFFS

RECENTLY ANNOUNCED PLANS FOR STAFF REDUCTIONS

IBM	20,000	WESTINGHOUSE	4,000
U.S. WEST	6,000	TENNECO	4,000
DU PONT	5,500	TRW	2,500
ALLIED-SIGNAL	5,000	XEROX	2,500

DATA: BUREAU OF LABOR STATISTICS, BW ESTIMATES

THE ECONOMY

NUMBERS DO LIE. JUST LOOK AT UNEMPLOYMENT

Part-timers, dropouts—there's a lot of pain behind a 'mild' jobless rate

In a recession, unemployment goes up. With that well-known business-cycle fact in mind, November's 6.8% unemployment rate is neither surprising nor ominous. After all, joblessness has averaged almost 8% during the past five recessions. That's one reason why President Bush, when he was questioned on Dec. 6 about the big drop in November employment, preferred to focus instead on the relatively mild unemployment rate.

But talk to neighbors, co-workers, or corporate recruiters about the job market, and they will all tell you the same thing: It's terrible. They're right—and the President is wrong. "The unemployment rate dramatically understates the pain, the distress, and the amount of unemployment out there," says Lawrence Chimerine, who is senior adviser to DRI/McGraw-Hill.

It's tough even on the lucky ones who avoid unemployment by scrounging up temporary work. Just ask Ferris B. Mack, a 36-year-old New York insurance broker. Laid off, he had been looking for a job for about a year before he found a temporary spot at Equitable Life Assurance Society in August. The work will probably last through April. Mack has looked for a permanent job in London, Boston, Chicago, and Atlanta. He has also tried to break into other industries. "But I'm hearing the same story throughout the country," he says. "Things haven't picked up, and in some cases they're getting worse."

PAINFUL ADJUSTMENT. Clearly, one reason for the disturbing discrepancy between mounting fear and the mild unemployment rate is the 20% increase over the past year in the ranks of part-time workers who want full-time jobs. Another lies with the slow growth of the labor force—the number of people gainfully employed or actively seeking a job. Thus far in the 1990-91 recession, the labor force has been growing at an anemic 0.4% rate, compared with its growth over the long haul of 1.8%. Simply put, a lot of people have stopped looking for jobs during this recession. And the government no longer counts these dropouts as unemployed or as part of the labor force.

Indeed, the national unemployment rate, after adjusting for normal labor-force growth, rises to a hefty 9.5%, estimates Paul Getman, economist at Regional Financial Associates Inc. By comparison, during the 1981-82 recession, the official unemployment rate peaked at 10.8% and the "adjusted" unemployment rate only rose an additional 0.3 percentage points, to 11.1%.

IN LIMBO: KELLY WEBER FEELS "LIKE A WAR VETERAN"

Why do people drop out of the work force? For many reasons. This time around, a lot of men in their 50s and early 60s have voluntarily or involuntarily taken early retirement. Some younger people, aware that job prospects are bleak, are back in school. Other workers, stuck in depressed parts of the country, such as New England, or with a résumé tied to a shrinking industry, are among the discouraged who have quit looking for work, says Getman (chart).

Many more may join this army in the months ahead. "Corporate restructuring," a Wall Street euphemism for management's recognition that it must fire people, is all the rage, especially in such service industries as insurance, banking and retailing. "Many service-sector jobs are gone for good," says Richard F. Berner, an economist at Salomon Brothers Inc.

Many laid-off workers will find part-time or temporary employment. But it's going to be a slog for them to find full-time positions in a downsized economy. "I think a lot of them are permanently unemployed, unless they take a step backward into a lower-level job," says Sanford Rose, chief executive of Sanford Rose Associates, an executive-search firm in Akron.

ROUGH PATCH. Today, self-employment may be less a paean to entrepreneurship than another profile in discouragement. "I think a lot of people who lose their job become 'self-employed' in order to maintain their social status," says A. Gary Shilling, head of an economic consulting firm. Even the self-employed with business work schedules typically face lower income and less security.

Take Manhattan's Kelly Weber. She's currently a merchandising consultant to manufacturers such as Perry Ellis Shoes that want to start up their own specialty stores. It wasn't always so. A 21-year retailing industry veteran with the likes of May Department Stores Co. and Saks Fifth Avenue, Weber first hit a rough patch in 1989. Fired after six months at one job, she signed on with Brown Shoe Co. to run Etage, a new chain of accessory and cosmetics stores. But 3½ years later, Brown restructured, and Weber found herself on the street, albeit with a nice severance package. Next stop, Bonwit Teller. Another severance after the parent company, Australia's Hooker Corp., went belly-up. Then, Pyramid Group, which bought the Bonwit name, hired Weber but later scrapped its ambitious plans. This time, no severance, just 60 days' notice. That was seven months ago. "I feel like a war veteran," she says. "I really want to feel settled, as opposed to being in the limbo land."

Limbo land is not even evident in the unemployment rate that President Bush cites as evidence that things aren't so dire. But the pain lurking behind the statistics augurs ill for the economy.

By Christopher Farrell with Laura Zinn in New York

ING OUT OF OPTIONS: LOW-COST FINANCING IS MOVING CARS—BUT HURTING PROFITS

M SLICES AND GM SLASHES, UT THE FLAB SURVIVES

spite hot new models, the giant is still hobbled by heavy overhead

the wake of a sobering directors' neeting on Dec. 9, General Motors Corp. is preparing a major cost-cut- initiative that Chairman Robert C. npel bills as "a comprehensive pro- to improve profitability." Write- and plant closings seem likely. But y stock analysts already fear that olan, scheduled to be announced on 18, won't do enough. In the days re the announcement, GM's stock ded below $27 a share, a four-year

hat's spooking the market is the kness of GM's North American auto ation, which is rolling toward a rec- $6 billion operating loss this year, ysts estimate. To conserve cash, npel has already delayed some new- el development programs—including ated versions of such profit makers he S-10 pickup truck and Blazer t utility vehicle. with little sign of upturn in the U. S. market, credit rat- such as Standard & 's Corp. are consid- g a downgrade of debt. That could about $200 million 00 million a year to borrowing costs. onically, all this bad s is hitting just as GM launches nine redesigned models—more than any competitor. The cars, including the 1992 Buick Le Sabre, Pontiac Grand Am, and Cadillac Seville (page 98), are selling well so far. But that is thanks in part to heavily advertised cut-rate financing. For instance, GM has low-cost deals on the Le Sabre, Pontiac Bonneville, and Oldsmobile's new downscale Achieva and its Olds 88. The deals helped boost sales of the Olds 88, for one, by 73% in November. But they are also contributing to GM's losses.

STILL BLOATED? The biggest drag on GM, however, is its payroll of 95,000 white-collar workers. Although GM has trimmed staff 28% since 1983, it could easily slice 20,000 to 30,000 more people from its many layers of management, analysts say. GM "has more capacity and people relative to [sales] volume than we do," notes Philip E. Benton Jr., Ford Motor Co.'s president. "GM's costs are out of whack with the competition," agrees Maryann N. Keller, an analyst with Furman Selz Inc. in New York.

GM could close up to four assembly plants, plus three times as many parts operations, analysts contend. An oft-cited example: Its Doraville (Ga.) factory will build only about 90,000 Cutlass Supremes this year, way below its 240,000 annual capacity. Cutlass Supreme production could be shifted to another underutilized plant. William E. Hoglund, executive vice-president in charge of GM's components operations, recently told analysts GM also has roughly 11 million square feet of unused space in its parts-making factories.

SWEATLESS PAY. The question is how much would plant closings save. GM's current contract, in effect until 1993, guarantees United Auto Workers members full pay—even if the factories are quiet and they're at home watching TV. GM has pledged $4 billion to make sure workers get paid no matter what happens to their plants.

The financial pressure on GM, meanwhile, is building. In November, S&P lowered from A to A– the rating on GM's preference and preferred stock and began reviewing its ratings for GM's long- and short-term debt. Moody's Investors Service Inc. quickly followed suit. A downgrading of GM's debt would clobber its General Motors Acceptance Corp. finance unit, one of its few profit generators. GMAC regularly rolls over the $20 billion in short-term debt it uses to help fund car loans to consumers and dealers.

Moreover, GM has borrowed heavily to keep most of its product-development programs on track. GM recently sold $1 billion worth of preference stock to bolster its balance sheet. But its debt-to-capital ratio at the end of 1991 will be 70%, up from 40% in 1989, says Scott Sprinzen, an S&P vice-president for corporate finance. That cuts down on maneuvering room. GM is "aggressively leveraged at this point," Sprinzen says.

GM has managed to hold its share of the domestic car market at 35.6% through November, about the same as last year. Stempel has said he wants to avoid the wrenching upheaval that characterized GM's attempts at reorganization in the 1980s, so he may try to get by with less drastic cuts than investors would like. But if the auto slump lingers and the new models still won't move without price-cutting, more draconian measures may become his only option.

By David Woodruff in Detroit

THE ACHIEVA: OLDS' NEW DOWNSCALE TRY

PHOTOGRAPH BY WALTER P. CALAHAN

Commentary/by John W. Verity

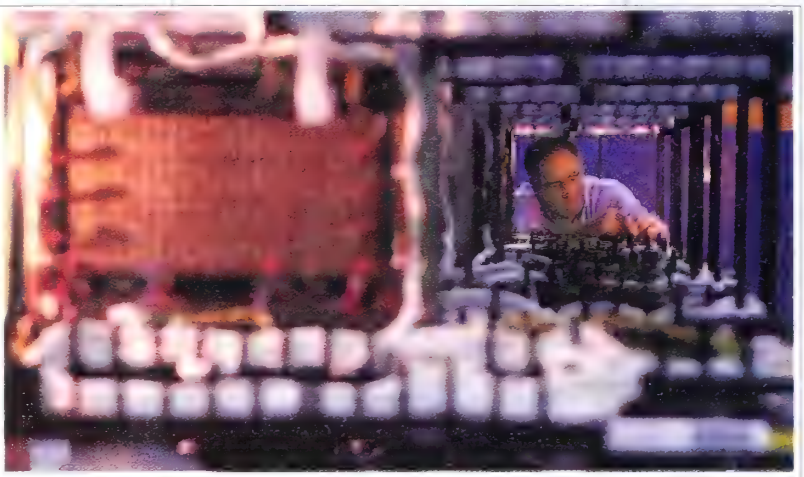
THE BIG WINNERS IN BIG BLUE'S BREAKUP: CUSTOMERS

The news of radical surgery at IBM, a restructuring of the company into independent business units, has been welcomed on Wall Street with about as much warmth as a flu outbreak. After an immediate but momentary upswing from 95 to 98, IBM's stock skidded as details of the wrenching plans became clear. Investors worry, analysts say, that the turmoil of the wide-ranging reorganization will hurt IBM's sales before it helps. Indeed, when Chairman and CEO John F. Akers told securities analysts on Dec. 9 that IBM's revenues will likely grow more slowly than the rest of the industry's next year, the stock touched a price not seen since 1982: 83½. Now, it's hovering around 86.

But is the situation all bad? Granted, this pillar of American business and U.S. technological pride has been in the doldrums for six years. It also plans to put 20,000 people out of work next year, in addition to the 50,000 already let go. And despite its vigorous efforts to cut costs, decentralize decision-making, and speed new products to market, stockholders are more frustrated than ever: They long for the time when IBM seemed invincible—and when its return on equity, at 17%, towered over that of other large U.S. industrial companies. In those good ol' days, Big Blue was the bluest of blue chips. Yet Wall Street, waiting impatiently for IBM to regain its former strength, isn't seeing the whole story.

TRIMMING DOWN. In fact, IBM's struggle, as painful as it may be to watch, is a positive sign. Competition and technological innovation from upstarts such as Sun Microsystems Inc. and Microsoft Corp. are forcing an inefficient supplier—and an enormous one at that—to trim down, be more competitive, and serve its customers better. IBM contains the bulk of the U.S.'s computer design and manufacturing resources. Its streamlining should make the U.S. industry stronger and better able to battle its main opponent, Japan.

If all goes well, the "commonwealth" of independent IBM companies that Akers envisions will unleash the company's immense resources. Its historically strong storage products division, for instance, is being set loose to sell disk and tape drives to other computer companies—something IBM was generally loath to do in years past. The result should be increased competition and therefore better products, both for IBM and its rivals. IBM execs hint at moves into the consumer electronics market, too, and they say they're even considering aggressively selling microchips on the open market. That could give the rest of the U.S. electronics market the benefits of IBM's tremendous technological prowess while also making its chipmaking more efficient.



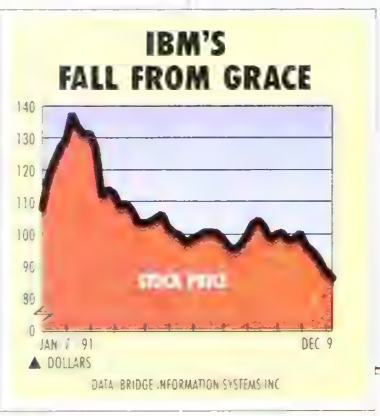
A NEW DYNAMO? IBM WILL SELL ITS STORAGE PRODUCTS TO OTHER COMPANIES

Better yet for computer buyers, IBM is finally having to play by the same rules as its smaller competitors. For instance, Big Blue is getting serious about industry standards, creating so-called open systems, which cost less and put more power into the hands of customers. "We will continue to open up the AS/400" minicomputer to industry standards, says Jack D. Kuehler, IBM's president.

Until recently, critics contend, IBM had so much clout it seemed almost oblivious to such pressures. From the moment that it sewed up 60% of the nascent computer market with its System/360 25 years ago, IBM has established almost every important technical standard, from the shape of disk drive plugs to the format of network message systems. That control, critics contend, allowed IBM to slow the pace at which new technologies entered the marketplace, to keep prices high relative to underlying costs, and to earn its famous profits.

SITTING DUCK. To be sure, the new tack is perilous for Big Blue. "Talk about a battleship sitting in Pearl Harbor," says George Lindamood, a research at Gartner Group Inc., a Stamford (Conn.) consulting company. Divisions going their own ways, for instance, could spell trouble for Systems Application Architecture (SAA), IBM's plan to tie together different computers and software in one compatible bundle. But, again, computer users should eventually benefit. If SAA fails, the market will impose a better way of interlocking incompatible machines—one that will probably make it easier for people to connect the best machines available, whether from IBM or one of its competitors.

A decade ago in January, the Reagan Administration dropped a Justice Dept. antitrust suit against IBM that sought to break up Big Blue into four broad-based companies. The idea was to foster fierce competition among the new units and make the whole computer industry more competitive. How ironic that the market forced the change anyway. Whether the giant is up to the challenge or not, buyers and users will benefit.



Y HAS PLANS FOR TWO MORE CHIC SHOWROOMS, IN NEW YORK AND LOS ANGELES

ONY'S 'GALLERY' HAS RETAILERS EARING FOOTSTEPS

the company says promotion is the main goal of the Chicago store

's not your typical electronics super-store. First, it's on Chicago's tony North Michigan Ave., within a block uch carriage-trade haunts as Cartier, berry's, and Saks Fifth Avenue. And mbience is as stark as a museum's, boom boxes and the hot-selling camcorders on pedestals like so y *objets d'art.* Even the service is aordinary: A few days ago, a techni- hustled off to teach an elderly vser how to operate her TV's remote rol. "We don't care that she didn't it here," explains Elaine M. Reck, ager of Chicago's just-opened Sony ery of Consumer Electronics. "It a Sony, and we want people to feel fortable with our products. That they'll buy Sony again."

ll that's making Sony Corp. of Amer- new store the talk of the electronics le far beyond the Windy City. ned on Dec. 11, it's Sony's first bid etailing in the U. S. Only two more es—in New York and Los Angeles— planned, but some retailers worry Sony may get to like hawking its wares. "Since it already operates its [licensed] stores in Japan and Eu-, the question is: 'Is this just a toe in water for Sony?' " worries Robert is, president of Philadelphia-based Inc., the No. 2 superstore operator. ony executives say that such fears misplaced. Making money from the ery isn't the goal, they say. Rather, Sony wants to bolster its already well-tended image by offering in-depth product information and demonstrations in elaborate "lifestyle" settings. For instance, the Chicago Gallery has a life-size mock-up of a small apartment—complete with bedroom and kitchen—with a built-in Sony home theater system. The Walkman is displayed on trendy mannequins posed at sport and play.

The Gallery also will showcase new Sony technologies that many stores don't carry yet. An entire wall in the three-story Chicago store is devoted to demonstrating Sony's new Data Discman, which uses a small screen to display "books" on compact disks. There's also a prototype of Sony's high-definition TV technology. "We want to set up oases to showcase Sony's full product line and explain the premium technology behind it," says John Briesch, president of Sony Consumer Products Group.

Such image building is increasingly important as the consumer-electronics business matures. With VCR sales slowing, growth has dropped to less than 3% annually, according to the Electronic Industries Assn. Moreover, most superstores and lower-service retailers stress price over features. "We need to explain why [Sony products] deserve to be higher-value purchases," says Briesch.

NO COMPETITION. Sony isn't alone in looking for new ways to stand above the crowd. French giant Thomson's U. S. consumer-electronics group, which manufactures the RCA and General Electric lines, is also trying to get more feature information to consumers. Thomson has installed its InfoTheatre product information systems in about 1,000 stores that sell its premium-priced ProScan and RCA lines. Using a videodisk player and a 35-inch TV, InfoTheatre allows customers to select consumer-electronics topics from a menu and have explanations and demonstrations provided by the system.

To avoid competing with its retailers, Sony says the Gallery will only sell products at full retail price. It also will refer shoppers to local Sony dealers, whose prices usually are lower. Retailers are taking a wait-and-see attitude. "From what I've seen, Sony has done an exceptional job of illustrating the high-quality nature of its technology—and that's good for everybody," says Richard M. Schulze, chairman of the Best Buy Co. superstore chain. But cautions Schulze: "If they decided to put up 15 of these in Chicago, I wouldn't be so positive."

By James E. Ellis in Chicago

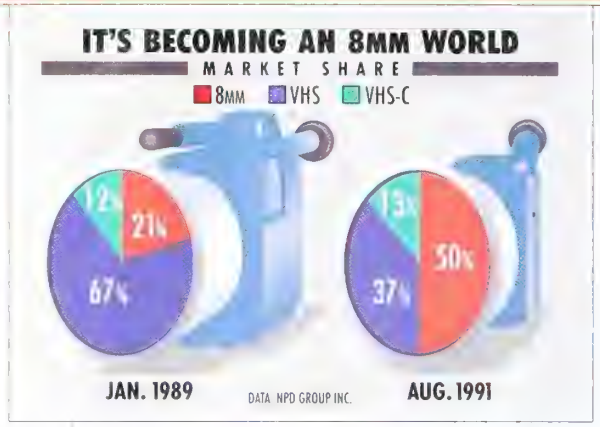
CONSUMER ELECTRONICS

CAMCORDERS: SWEET REVENGE FOR SONY?

It bombed with Betamax—but 8mm video cameras are gaining fast

Mike Kotin is a knowledgeable consumer. Before buying a camcorder recently, the 34-year-old New York stockbroker read up on the subject. Then he went browsing in stores to check out all three formats in which portable video cameras are sold: older, bulkier full-size VHS, its more compact VHS-C cousin, and the 8mm version that fits in the palm of your hand. Kotin went for an 8mm, and size wasn't the only consideration. "The quality of 8mm is superior," he says.

Them's fightin' words in the contentious $3 billion camcorder market, where big Japanese companies such as Sony and Matsushita Electrical Industrial's Panasonic are jockeying to get consumers to buy their formats. The dukes are really flying this year, as the 8mm for-



[rest] pioneered by Sony Corp. has grabbed the lead, according to market researcher NPD Group Inc. in Port Washington, N. Y. (chart). That's sweet revenge for Sony, whose earlier Betamax video recorder format was knocked out of the market by Panasonic Co. and its VHS partners during the 1980s. This time, Sony has steadily built up market share since introducing the 8mm in 1985. Today, Sony says it moves about 40% of the camcorders sold in the U. S. and about 80% of all 8mm units.

Panasonic insists that VHS is still the dominant format. But it concedes that 8mm is making headway, so it is counterattacking with print and television ads urging potential camcorder owners to ask: "Will it play in my VCR?" The question is aimed at some 75 million households that have VHS-compatible video recorders.

Panasonic wants consumers to know that 8mm cassettes won't play in standard VCRs. Owners of VHS-C camcorders merely put cassettes into an adapter for their VCRs. By contrast, Sony-style 8mm models must be connected to a TV or VCR to play tapes—unless the buyer owns a costly 8mm player. Many find this cumbersome. Gerald M. McCarthy, president of Zenith Sales Co., a division of Zenith Electronics Corp., which markets all three formats, says retailers handling his products are reporting "an inordinate number of returns by consumers" who bought 8mm camcorders believing they could be played in conventional VCRs. Sears, Roebuck & Co. says it has had returns but not a large number.

SLIMMER MARGINS. What's a body to do? Most buyers of small camcorders now find the inconveniences of 8mm offset by its benefits. Besides the handy compact size, standard 8mm tapes play up to two hours vs. 30 minutes for VHS-C. What's more, experts such as *The Perfect Vision*, a quarterly video magazine, say that 8mm is technically superior to VHS and VHS-C. Sony and other 8mm makers hope to further woo the adherents with cheaper 8mm VCR and Video Walkmans on which view their results. This has ha pened in Japan, where 8mm mak up 70% of the market. Productio of full-size VHS camcorders w phased out in Japan last year.

Who will win the great ca corder war? The compact VHS units that Panasonic and its pa ners are pushing aren't out of t running. More dealers are carr ing VHS-C as margins on 8m have been pared by price cuts th year. Moreover, VHS-C models no are almost as light and small as the 8mm rivals. They're also about to i prove: Panasonic is planning to intr duce a new VHS-C line next spring.

Given all that, 1992 could be the mak or-break year in the camcorder dust-u With the competition intensifying, t average price of both 8mm and VHS camcorders has been falling by as mu as $10 per month. From 11% more e pensive than old-fashioned VHS mode last year, the new compact camcorde have dropped to almost the same price around $855, on average. So, whichev format wins the great camcorder wa consumers will get a better deal.

By Bruce Hager in New York, with N Gross in Tokyo

RETAILING

ANYTHING UNDER ZALE'S TREE?

The debt-ridden jewelry retailer needs a holiday miracle—at least

The Christmas season may not have come soon enough for the folks at Zale Corp. Plagued by the recession, mounting losses, and a heavy debt load, the world's largest retail jewelry chain is facing a cash crunch and scrambling to find an 11th-hour solution to avoid bankruptcy. Without hearty Christmas sales, it hardly stands a chance.

Even that glittering possibility—slim as it is—may only forestall a painful overhaul of the Irving (Tex.) chain. Zale's second-quarter net loss of $85 million has already thrown the company into default on its bank credit lines. And earlier this month, the jeweler missed a $52 million interest payment on its junk bonds. Zale is banking on Christmas sales to pay bondholders by Dec. 31, when a 30-day grace period expires. "If they don't pay, I'll put them in bankrupt-

SHOPPING: WARY CUSTOMERS MAY BE THE LAST STRAW

cy," vows David Glatstein, president of Barre & Co. The Dallas-based securities firm has sold $50 million in Zale bonds, which recently have been trading between 15¢ and 40¢ on the dollar, and still holds some in inventory.

Zale's holiday gloom is rooted in its hefty $1.2 billion debt load, which stands at a steep 71% of capital. The tab includes about $500 million borrowed in its 1986 Drexel Burnham Lambert Inc.-financed hostile takeover by [illegible] joint venture of Peoples Je ellers Ltd. of Toronto a Swarovski International Ho ing of Switzerland. Peopl and Swarovski each own 47 stakes, and the balance is he by employees. Three yea later, Zale, which also ow jewelry chain Bailey, Banks Biddle, piled on an addition $300 million raised by Drex to buy top rival Gordon Jew ry Corp.

NO GOLD WATCH. Until rece ly, Zale's cash flow w strong enough to service t debt. But in a sputtering ec omy, nervous consumers a forgoing such luxuries as d monds and gold watches. far this fiscal year, whi started in April, Zale's sales are more than 8% vs. about 5% for the ret jewelry industry. Last year, Zale repo ed a $54 million loss, while sales r about flat at $1.3 billion.

Even if Zale makes the Decemb bond payment, it faces a flood of oblig tions totaling $230 million over the ne six months, most ominously a $108 m lion payment due on outstanding bon But it's expected by Barre & Co. analy

y® Sapphire™ Gin. 47% alc/vol (94 Proof).
grain neutral spirits. © 1989 Carillon Importers, Ltd., Teaneck, N.J.
BOMBAY SAPPHIRE
BOMBAY
PRODUCT OF ENGLAND
BOMBAY SAPPHIRE.
POUR SOMETHING PRICELESS
FOR THE HOLIDAYS.

Jeffrey B. Middleswart to generate only $90 million in cash flow. Many analysts, such as Raz Kafri of Lehman Brothers, a unit of Shearson Lehman Brothers Inc., believe Zale will have to file for Chapter 11 soon after Christmas, using holiday cash to operate in bankruptcy.

In the spirit of the season, Zale officials remain decidedly upbeat. Charles F. Gill, president of Peoples Jewellers, refuses to acknowledge the possibility of Chapter 11. "This company still has tremendous value, which is best maximized by working together outside of formal proceedings," says Gill, who also serves as assistant to Irving R. Gerstein, chief executive of Zale and Peoples. Gerstein, who did not comment, and his family make up Peoples' principal owners.

Meanwhile, Zale is slashing costs and scrambling to raise cash. It has cut inventory this year by $60 million and capital expenditures by $25 million. Some $80 million worth of accounts receivable are being sold. Also on the auction block are other assets worth $65 million. To date, Zale has raised about $35 million by selling 25 stores, and it plans to unload another 80 of its 2,000 units. It has clinched another $40 million by selling a 5.5% equity stake to employees.

SUGAR DADDY? If those efforts fall short, Zale still has one long shot: a cash infusion from an outsider. Neither Peoples nor Swarovski, which together put up an additional $100 million in 1990, is expected to pour more money into the venture. Zale insists it has "several" prospects after more than a year of searching. Former CEO Donald Zale, whose father founded the company, says he may try his hand again. He has been approached by a group that's interested in investing in Zale, and he is mulling whether to join the group.

For now, the company is concentrating on Christmas. With 40% of its annual revenue at stake, the company is beefing up its sales staff, fine-tuning its merchandise selection, and aggressively targeting customers through direct mail. "The last couple of weeks can make all the difference," says Gill.

Perhaps. But even if Zale gets into 1992 without filing for Chapter 11, it won't have an easy time of it. For beyond its own very pressing financial problems, Zale still has to worry about when the economy will begin growing in earnest again. When consumers return to the mall, diamonds, gold anklets, and such baubles likely won't be priorities for shoppers. Instead, they figure to be spending more time prowling for wardrobe staples. Heck, what was it President Bush picked up the last time he hit a mall? Socks.

By Stephanie Anderson Forest in Dallas

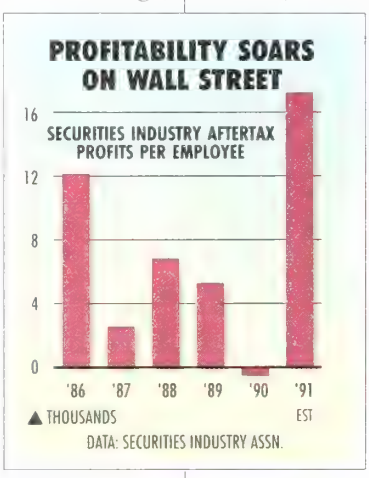
INVESTMENT BANKING

JUST LOOK AT THOSE BIG GRINS

Wall Street bonuses are fat—and traders are getting the fattest ones

For most of the 1980s, Wall Street's pin-striped investment bankers held sway over their shirt-sleeved brethren, the traders. Dealmakers produced the heftiest profits and won the biggest bonuses. "It's a source of tension on Wall Street," says Alan Johnson, a recruiter with GKR International, an executive search firm. "Traders went to New York University or City College, and the bankers went to Yale."

This year, with bonuses on the Street generally up 20%, the traders are raking in more than the bankers. On average, investment bankers' bonuses will grow a modest 10% to 15% from last year, while traders' will jump at twice that rate, Johnson estimates. Top traders will see far heftier increases. "The big numbers this year are driven by the trading and sales side because they have delivered the biggest profits," says Joan Zimmerman, a recruiter with G. Z. Stephens.



The industry has turned in a near-record year. Pretax profits are expected to hit $5.3 billion, close to 1986's record $5.5 billion. About 25% of 1991's profits came from trading for customers and the firms' account. Goldman, Sachs & Co. and Morgan Stanley & Co. are set to hand out fat bonuses, with other large firms expected to give handsome payouts, too. "1991 has been better than 1990, and bonuses will be up materially," says Howard L. Clark Jr., chief of Shearson Lehman Brothers Inc., referring to Lehman Brothers, Shearson's investment house.

WISHFUL THINKING. The glaring exception: Salomon Inc. There, traders and bankers both are settling for less. Bonuses at Solly are down at least 15%, say Street sources, with investment bankers getting some 25% less. In the wake of the Treasury bond-buying scandal, Salomon Chairman Warren E. Buffett has publicly questioned the entire practice of paying big bonuses, saying Wall Street overpays itself at shareholders' expense. But Buffett's views are expected to have little impact. "Buffe stimulated a lot of wishful thinki among Street CEOs. The problem is, wi legislators breathing down Solly throat, it doesn't have the credibility" force bonuses down industrywide, sa Gary Goldstein, president of Whitn Group, a Wall Street recruiter.

A big part of the Street's profits car from fixed-income securities trading, pecially such niches as mortgage-back securities and junk bonds. Traders these markets will rack up the bigge bonuses, since some are paid up to 2 of what they earn f the firm. And while vestment bankers ha seen a boom in unde writing volume, fe on corporate securiti issues are far low than merger-and-acq sition fees, which r as high as 5% of t acquisition price. Als underwriting fees a split between ma firms, and only init public offerings ea as much as 6% of t principal amount.

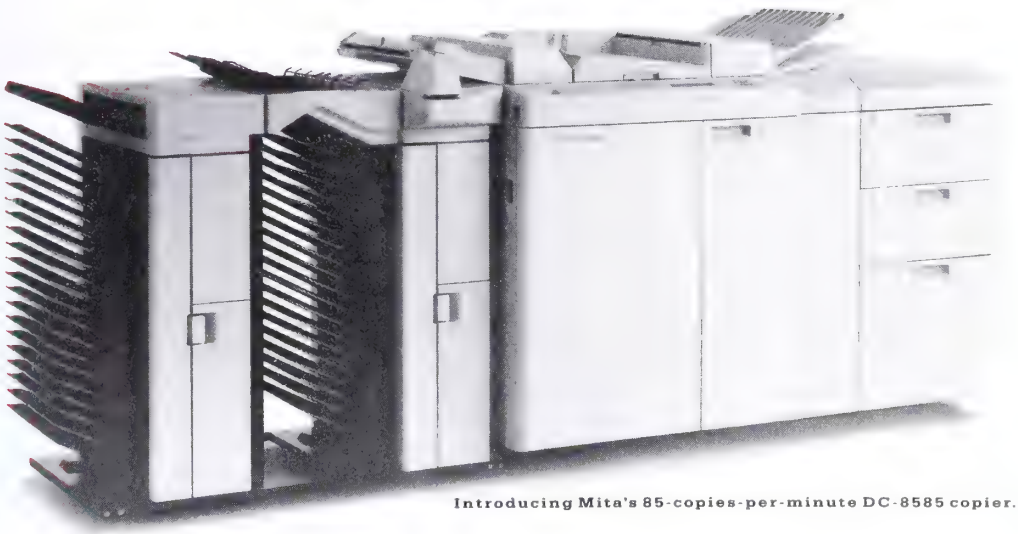
The Street's mo profitable firm is Goldman Sachs. Th year, the private partnership is expect to earn as much as $1 billion in pret profit. That sum is split among 146 pa ners. Competitors and headhunters spe ulate that Goldman co-Chief Executiv Robert E. Rubin and Stephen Friedm and perhaps two other key Goldm partners will divvy up some $100 milli of that, while the lowliest partners a believed to make $2.5 million each. Ho ever, all Goldman partners are requir to keep their bonuses invested in t firm until they retire.

Morgan Stanley turned in a good ye too, especially in fixed-income tradin Of the $500 million it's expected to ea in 1991, some 40% to 50% comes fr trading, most of it from the fixed-incor side. Some 10 people will get bonuses $5 million to $7 million, and close to will receive from $1.5 million to $4 m lion, says an insider. That didn't st Morgan this month from laying off people. And not one was a trader.

By Leah Nathans Spiro in New Yo

MITA introduces something unheard of in the world of high-speed copiers.

Competition.



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If you were looking for a high-speed copier before now, you probably didn't have a lot of choices ■ But with the Mita high-productivity DC-8585, you get all the usual features associated with the best high-speed copiers plus some interesting additions ■ Our highly competitive Cost-Per-Copy Program is one of them ■ So is MEMO, which is an electronic remote monitoring system that gives you fast and accurate billing ■ And because Mita has been making copiers for 57 years, you don't have to wonder about reliability ■ So if you'd like to hear more information (facts and figures the competition doesn't like to hear), call 1-800-ABC-MITA and ask about the Mita DC-8585.

mita

[the image specialist]

* THE MITA DC-8585 IS AVAILABLE THROUGH SELECTED MITA DEALERSHIPS IN LIMITED AREAS.

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ADVERTISING

I'D TODDLE A MILE FOR A CAMEL

The furor over a cartoonish campaign threatens a wide array of ads

From 1987 to 1990, R. J. Reynolds Tobacco Co. saw its share of Camel filter cigarettes jump from 2.7% to 3.1%—some leap for an aging brand when U. S. cigarette sales are sinking. The No. 2 tobacco manufacturer resuscitated the brand largely through a four-year-old ad campaign featuring a cartoon character of its Camel mascot. Now, it's looking as if the extra market share may have come at a steep price.

Antismoking crusaders and health officials have repeatedly criticized the cartoon dromedary as an effort to target underage smokers. After long denying these charges, Reynolds now also must fend off dramatic new evidence published in the Dec. 11 issue of the *Journal of the American Medical Assn.* The journal reports that Old Joe Camel, as the character is called, entices kids to light up. The studies cited in *JAMA* no doubt will bring other tobacco companies into the debate, not to mention alcohol marketers who also have come under fire for ads that may appeal to kids.

DEAD PENGUIN? According to the studies published in *JAMA*, teenagers are far better able than adults to identify the Camel logo (table). One study even found that kids as young as three identify the cartoon with cigarettes. More chilling: One study concluded that Camel's share of the market of underage children who smoke is nearly 33%—up from less than a percentage point before the Old Joe campaign got rolling. "We're hoping this information leads to a complete ban of cigarette advertising," says Dr. Joseph R. DiFranza, a University of Massachusetts Medical School researcher who worked on one of the studies.

Reynolds contests the studies' results. It cites a U. S. Office of Smoking & Health study issued this year that says 8% of kids ages 12 to 18 who smoke choose Camels. The average Camel smoker, Reynolds says, is 35. "Just because children can identify our logo doesn't mean they will use the product," a Reynolds spokeswoman says.

Reynolds isn't the only tobacco company under scrutiny. Last month, Brown & Williamson Tobacco Corp., a division of BAT Industries PLC, began testing a cartoon penguin logo for its Kool brand. Brown & Williamson won't comment on the *JAMA* studies, but some antismoking activists believe the company will quietly drop the test campaign.

Advocacy groups expect that the Camel studies will also rekindle debate on alcohol advertising. "This information shows that it's clearly time for reform in both tobacco and alcohol advertising," says Patricia Taylor, director of the alcohol policies project for the Center f Science in the Public Interest.

Last month, U. S. Surgeon Gener Antonia Novello slammed alcohol a that "appeal to youth on the basis certain lifestyle appeals." On her hit li the likes of Spuds MacKenzie, the "Pa ty Animal" dog in Anheuser-Busch Co Bud Light ads; sexual appeals; a scenes mixing booze with such risky a tivities as scuba diving and skiing. S called for a voluntary ban on campaig that attract minors, but after a Dec. meeting with chiefs of 10 alcohol ma keters, Novello may have backed off bit. A joint statement after the meeti stresses education against underag drinking and mentions no voluntar restrictions.

BUMPER STICKERS. But politicians a getting in their whacks, too. The Tex Attorney General's office, which wag a successful campaign against misle ing food claims, is conducting its ov probe of the effects of alcohol ads minors. In Washington, staffers in t office of Representative Henry A. W man (D-Calif.) are talking about legis tion that would severely restrict tobac advertising. Waxman last year failed get very far with a proposal to ban photographs and illustrations in tobac ads. "But that was before we had sci tific studies that show the effect of a vertising on undera youth," says an aide.

Madison Aven has taken r tice—defensiv ly. Complai Hal Shoup, w is executive vi president of t American Assoc tion of Advertisi Agencies: "People int ested in attacking the r causes of underage tobac and alcohol use should fi other solutions than trying impose unconstitutional restr tions on advertising."

Reynolds is making every eff to counter the bad press. It recen distributed pamphle and bumper sticke and put up billboar discouraging kids fr smoking. For now, has no plans to drop J Camel, saying the ca paign is meant f adults. But even go intentions may pa next to hard evidence

By Wendy Konrad in Atlanta

OLD JOE: A HIT EVEN WITH TYKES

OLD JOE HAS CAUGHT FIRE WITH TEENS

Results of a survey of 1,055 students ages 12 to 19 years, and 345 adults, ages 21 to 87 years, on Camel's Old Joe advertisements:

	Students	Adults		Students	Adults
HAVE SEEN OLD JOE	97.7%	72.2%	LIKE JOE AS FRIEND	35.0%	14.4%
KNOW THE PRODUCT	97.5	67.0	SMOKERS WHO IDENTIFY CAMEL AS FAVORITE BRAND	33.0	8.7
THINK ADS LOOK COOL	58.0	39.9			

DATA: *JOURNAL OF THE AMERICAN MEDICAL ASSN*

You know where you stand. Your finances are under control.
With no revolving credit on bankcards. No more interest charge "surprises."
You take a different view. You're happy.

THE CARD.
THE AMERICAN EXPRESS® CARD.

TRADE

CHINESE PRISONERS: CUSTOMS IS SEIZING MACHINES AND BANNING IMPORTS OF OTHER GOODS

BUSH IS SETTING THE BLOODHOUNDS ON BEIJING

He needs to get tough—so Customs is nabbing prison-made exports

The first tip came in October, in the form of a letter from a disgruntled competitor. Two months later, on Dec. 2, a dozen Customs Service agents showed up at E. W. Bliss Co. in Hastings, Mich., with a search warrant. While employees were quickly sent home, Bliss President Robert A. Fuller looked on in amazement. Customs combed his offices for seven hours and found what they were after: evidence that the company had been importing machine presses manufactured in Chinese prison factories. They seized 31 machines valued at $560,000 and seven boxes of documents that Customs says will prove that Bliss officials knowingly purchased their goods from these prisons. Bliss denies any wrongdoing.

The unprecedented raid is the most dramatic indication yet that the White House is putting the issue of Chinese forced-labor exports on the front burner. In an election year, Bush is feeling the heat from Congress for being soft on Beijing. To combat his critics, Bush has given Customs officials the green light to go get 'em. "We are looking into every allegation that comes down the pike," says Joseph R. Willey, a senior special agent at Customs in Washington. "The guidance we're getting from the Administration is: 'Full speed ahead.'"

Customs is turning up more dirt than anyone expected. Besides the Bliss raid, officials have recently blocked the entry of at least a half-dozen goods made in China's gulag. Under U. S. law, it is illegal to import prison products. Not only is Customs pinpointing consumer goods, such as socks and wrenches, but it also is finding that capital equipment made in Chinese labor camps is being imported by U. S. buyers. In November, Customs in San Diego barred entry of 49 Jinma (Golden Horse) brand diesel engines, valued at $22,000, that were made at Yunnan No. 1 Prison. In the Bliss case, Customs intends to turn over its evidence in the raid to the Justice Dept. If criminal charges are filed—they would be the first ever in such a case—some executives could face fines and even prison.

To blunt a congressional attack on China's most-favored-nation trade status, Bush needs to get tough on illegal imports and other grievances, such a Beijing's human rights abuses and mi sile sales. The vague memorandum c understanding on prison exports tha Secretary of State James A. Baker II hailed during a November visit to Be jing was scorned by Congress. And th notion that cheap prison exports are fu eling China's $10 billion trade surplu with the U. S. angers many on Capit Hill. "American workers may have t compete with people who make $3 a da but they shouldn't have to compete wit people who are in jail," says Represent tive Sam Gejdenson (D-Conn.).

> Executives at Michigan-based Bliss could be jailed for knowingly importing forced-labor goods

LUCKY BREAK. For months, Customs off cials have been engaged in the cumbe some job of tracing the trail of good from China's prisons to the U. S. marke In the Bliss case, they got lucky. Accor ing to an affidavit for a search warra filed by Customs in federal court i Grand Rapids, Mich., officials wer tipped off by Margaret G. Mathia chairman of L&J Press Corp. in Elkhar Ind., a Bliss competitor. In recent year Bliss had been snaring market share b selling its 35-ton stamping machine fo $26,000, while L&J's went for $33,00 When Mathias asked then-L&J Vice-Pre ident Larry Crosby, who had worked a Bliss for 25 years, how Bliss could offe such low prices, Crosby said the ma chines were made in a Chinese prison.

Crosby told Customs that Richar Fackler, Bliss's former president, kne that the presses Bliss planned to impo were made in a prison factory. So di Bliss owner Chris Gregorio and the com pany's current president, Fuller, accor ing to confidential sources in the affid vit. One source says that Bliss supplie the prison with components for th presses and that Bliss officials visite the factory and saw "inmates unde armed guards" at work. Fuller says ne ther he nor Gregorio had "hard evidenc that, in fact, we were dealing with prison." On a 1991 visit to the factory Fuller says he saw "absolutely nothing that resembled a prison. Fackler coul not be reached for comment.

Customs is also poised to block othe imports, such as Red Star tea, and i investigating China's Yingde brand te Some in Congress even want to empow er Customs to block an entire class o merchandise when some of those pro ucts are found to be made in a foreig prison. Customs may now bar only spe cific goods believed to be prison-made Even without the proposed changes, th crackdown is showing just how man prison-made goods from China are mak ing their way to the U. S.

By Amy Borrus in Washington, wit Greg Bowens in Detroit and Joyce Ba nathan in New York

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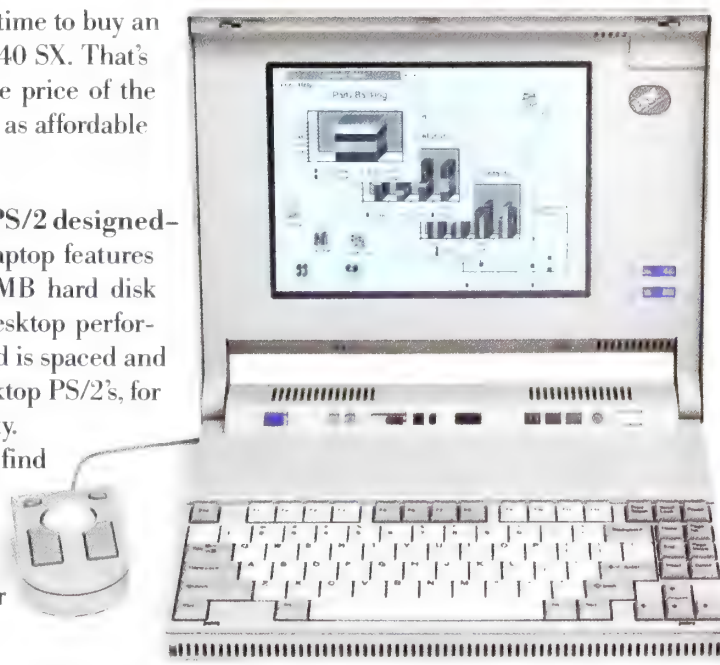

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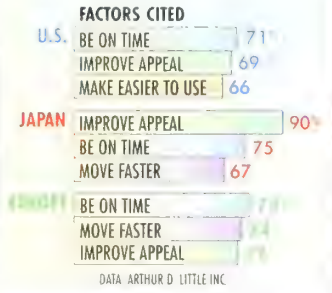
EDITED BY G. DAVID WALLACE

KEYS TO INNOVATION

When ranking factors in innovation, executives generally place heaviest emphasis on getting products to market on time, as planned. Ranking next are improving appeal of products and moving faster from concept to introduction. Priorities differ geographically, however, as the top three from each region show



DATA: ARTHUR D. LITTLE INC.

RJR EASES ITS DEBT LOAD

▶ Bid goodbye to another remnant of the overleveraged '80s: RJR Nabisco has recaptured investment-grade ratings for most of its $14 billion debt load. The food-and-tobacco giant, whose $29 billion in debt equaled about 95% of capitalization when it went private in 1989, has chopped its debt to 62%. RJR also expects to close a new pact soon that will lower the rate on its $3 billion in bank loans by about two percentage points, to less than 7%, and ease restrictive covenants. The result: more strategic flexibility as RJR tries to expand its tobacco and food businesses in Eastern Europe and Mexico and its food business in Latin America.

BANKERS CUT MACY'S SOME SLACK

▶ R. H. Macy & Co. got a respite from its financial struggles. The company, which lost $150 million for the year ended Aug. 3, said it will only have to pay its revolving bank loans down to $150 million over the next two months. The original terms called for Macy to pay the loans down to $1 million. Even so, analysts say the move indicates that the company may need further debt restructuring after Christmas.

THE FDIC STILL MAY BE SHORT

▶ More banking woes. The Federal Deposit Insurance Corp. reported on Dec. 10 that bank income hit $4.3 billion in the third quarter, up 17% from a year earlier. But the General Accounting Office told the House Banking Committee that the $70 billion recently approved for the insurance fund that backs the industry could be insufficient. The biggest threat is a collapse of any one of the larger banks not already on the FDIC's sick list. The GAO's gloomy assessment is predicated on the continuation of the sluggish economy and questions about the accuracy of existing bank accounting methods.

IS THE GREENHOUSE EFFECT JUST HOT AIR?

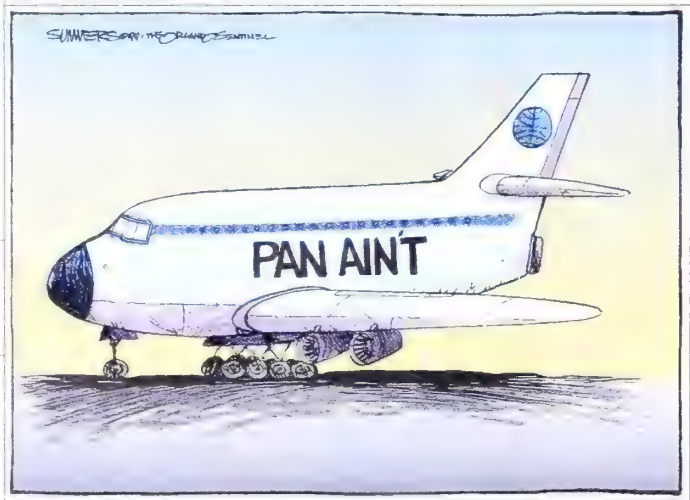
▶ Ready for some good news, climatically speaking? Scientists at the National Oceanic & Atmospheric Administration have examined 40 years of temperature records from the U.S., the Soviet Union, and China. Conclusion: Dire warnings of sweltering heat from the "greenhouse effect" may be nothing but hot air. The reason: Almost all of the 1F or so increase in temperature during the last four decades occurred because of warmer nights, not hotter days. Researchers figure that could mean a couple of things. Perhaps computer models showing higher temperatures from the buildup of carbon dioxide are wrong. Or maybe the balmier nights aren't caused by a "greenhouse effect."

'...AND A TUMMY TUCK IN A PEAR TREE'

Remember *All I Want for Christmas Is My Two Front Teeth*? Time for an update. Dr. Jim E. Gilmore, a cosmetic surgeon in Dallas, reports the holidays have become one of his busiest seasons. For teenagers, many of whom get the procedure as a gift, rhinoplasty, or nose reshaping, is the typical choice. The cost: $5,000 or so. Gilmore says the holidays also seem popular for one of his fastest-growing clientele group men in the 50-something category. They favor tightening u droopy eyelids or bags under the eyes. The procedure cost roughly $4,000 and, thanks to new techniques, involves only half an hour in the doctor's office. The patient is back to wor after a couple of days, without bandages or scars. "Peop draw conclusions about how we work or don't work by how w look," observes Gilmore. "That may be unfortunate, but it is fact of life." Over to you, Tin Pan Alley.

TRW PROMISES TO CHANGE ITS WAYS

▶ In response to complaint from consumers and law enforcement agencies, TRW In has agreed to make majo changes in its credit reportin operations. The company which earlier said it would o fer people a free annual pee at their credit reports, ha agreed to complete reinvest gations within 30 days of di puted information. A Federa Trade Commission offici predicts that consumers ca look for dramatic changes i the company's responsivenes to complaints.



A UNITED COUP AT THE PAN AM AUCTION

▶ United had the last laugh i the Pan Am sweepstakes. A a bankruptcy court auctio held on Dec. 9, United wo Pan Am's lucrative Lati American routes with a bid c $135 million. American an Delta had teamed up for joint bid, but Delta got only New York-Mexico City rout for $25 million. United had o fered Pan Am's creditors a much as $235 million for th same routes in August.

EDITED BY STEPHEN H. WILDSTROM

UAYLE'S PET PROJECT S LOOKING MORE LIKE A LIABILITY

hings are looking up for Dan Quayle. With the unseemly departure of White House Chief of Staff John H. Sununu, the Vice-President has become the Administration's link to conservatives at a time when George Bush badly ds someone to calm the restive right. What's more, new f chief Samuel K. Skinner is a Quayle golfing buddy who nises to pay more heed to the Veep's policy suggestions. ut before Quayle can bask in his role, he has to put out a shfire in his backyard. He has used the chairmanship of President's Council on Competitiveness to lash out at ious lawyers and to stomp aggressive regulators. Unfortuly for Quayle, council Executive Director Allan B. Hubd has given the panel's many enemies an opening to attack legitimacy of the antiregulatory campaign.

ubbard owns stock in chemical and utility companies that d to benefit from his own recommendations that clean-air posals be watered down. Democrats, including House th and environment subcommittee Chairman Henry A. xman (D-Calif.), called hearings to see if Hubbard should e disqualified himself because of a conflict of interest.

ne Administration's first instinct was to dismiss the ques- s as partisan sniping. "It's one of the oldest games in n," says Quayle spokesman Jeff Nesbit. "When you lose policy, you go after the individual involved." And White se lawyers quickly declared Hubbard had done nothing ng. But as the Democrats prepared to widen the attack, bard announced that he was putting his assets into a blind t and giving his 1,000 shares of PSI Resources Inc., a utility ing company, to charity.

ow that they've drawn blood, Democrats aren't about to . Senators, led by Governmental Affairs Committee Chair- John Glenn (D-Ohio), are demanding a full accounting of council's activities. The Democrats' main beef is that the ncil is undermining the Clean Air Act and other environtal, health, and safety mandates from Congress. Critics end that the panel has violated the law by acting in secret by meeting improperly with business lobbyists. "We do know if Mr. Hubbard has a conflict of interest because we do not know what the council is doing," grumbles Glenn.

Up to now, the Competitiveness Council has been Quayle's main tool in his uphill struggle for political respectability. But until he finds a way to contain the controversy, Quayle may have to spend as much energy fending off the council's critics as he does keeping conservatives inside George Bush's tent.

By Tim Smart

BUSH WILL HEAD FOR ASIA LOADED FOR BEAR

It took weeks of cajoling by trade officials, but President Bush has raised the symbolic stakes of his early January trip to Singapore, Seoul, and Tokyo by agreeing to take along a group of top U. S. executives. The purpose, says Commerce Secretary Robert A. Mosbacher, is to convince Asian leaders that "we expect the same open markets in these countries that we provide in the U. S."

The presence of Chrysler Chairman Lee A. Iacocca, an outspoken critic of Japanese trade practices, is sure to get the attention of Asian officials. The White House selected other executives for their leadership roles in trade advisory panels and business groups. For example, American Express Chairman James D. Robinson III heads a key panel advising the U. S. Trade Representative. Dexter F. Baker of Air Products & Chemicals and John T. Hartley of Harris Corp. are top officials of the National Association of Manufacturers.

These big names may impress foreign leaders, but Congressional Democrats will be a tougher sell. Success, says House Majority Leader Richard A. Gephardt (D-Mo.), "should be judged by whether the President wins measurable commitments for trade concessions from Japan and whether he persuades Japan to assume more of the costs of our military presence in Asia." Since the entourage has no real business to transact, that will be a tough standard to meet.

By Paul Magnusson

PITAL WRAPUP

ANKING

t's all over but the recriminations, yet the politics that produced a mini- l bank-reform bill after months of fort continue to roil the House Bank- g Committee. Some members would e to dump Chairman Henry B. Gonlez (D-Tex.) immediately, but House les make a mid-Congress change imssible. There is, however, sure to be heaval after the 1992 election, when nk reform is likely to resurface. ank Annunzio of Illinois, the No. 2 emocrat and chairman of the impornt financial institutions subcommit-e, will retire, as will Doug Barnard Georgia, a leading advocate of sweeping bank regulation reform. Another senior Democrat, Tom Carper, is leaving the House to run for governor of Delaware. If the House Democratic Caucus deposes Gonzalez when it elects leaders for the next Congress, the top candidates to head the panel would be Bruce Vento of Minnesota and Charles Schumer and John LaFalce, both of New York. But a problem plaguing the panel—lack of experience among members—is sure to get worse. Nearly half of its 52 members have served in the House for five years or less, and the departure of so many old hands will produce an influx of more rookies—making the business of reform more difficult.

INSURANCE

For decades, insurers have used their lobbying clout to remain the only major sector of the financial-services industry free from federal regulation. Now, large insurance companies are working with House Energy & Commerce Committee Chairman John D. Dingell (D-Mich.) on a plan that would give insurers a choice between federal or state regulation. If the measure—which Dingell plans to introduce next year—becomes law, large international companies may well opt for unified federal rules. Smaller insurers are likely to retain their comfortable relationship with state regulators.

ONE BIG CURRENCY— AND ONE BIG JOB AHEAD

The ECU will transform the way Europe does business—and the payoff could be tremendous

The historic accords on monetary and political union were in the bag, and the champagne was open and ready to pour. After 2½ days of intense dickering that stretched into the wee hours of Dec. 11, the European Community's 12 government leaders were ready to toast their achievements. Then an EC aide popped up with a heart-stopper. The leaders, he proclaimed, had "forgotten something." But when that something turned out to be nothing more than a minor procedural point, the conference room dissolved into relieved laughter and lifted glasses. Proclaimed French President Francois Mitterrand: "We have created a European union."

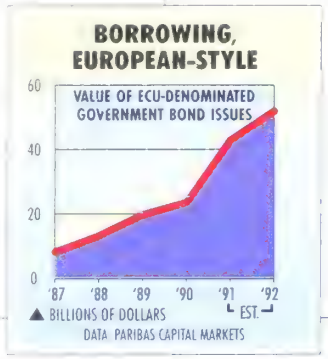
Europe's economy may be in the doldrums, but from Scotland to Sicily, Europeans have every right to be in a celebratory mood. Finally putting two years of harsh debate to rest, the EC leaders who met in the Dutch town of Maastricht launched a monetary union that will give Europe its own currency and central bank by the end of the century.

Like its precursor, the 1986 Single European Act that paved the way for free trade within the EC after 1992, the accord promises to become a powerful force for even closer economic and political integration. With the EC boasting 340 million consumers and a gross national product of $8.5 trillion, the new European currency unit, or ECU, has the potential to become a strong rival to the dollar in international finance and trade.

POUND DRAG. But turning the monetary deal into reality will be as difficult as putting 1992 into motion. Denmark, for example, still has to submit the currency plan to a nationwide referendum, and British Prime Minister John Major won the option of keeping the pound out of the union altogether. But time and again, says Dutch Prime Minister Ruud Lubbers, EC history shows that laggards "in the final analysis follow." A single currency, he added, "is now a fact of life."

The EC already has a monetary system, of course, with members' currencies closely linked to the mark. An ECU also exists, but its name appears on no bank notes. A composite of European currencies worth about $1.28, it's used solely for settling international accounts. Now, a new European Central Bank, blending the decentralized character of the U.S. Federal Reserve and the anti-inflation determination of Germany's Bundesbank, could be issuing real ECUs by 1997. That will irreversibly change the way everyone—from manufacturers to pension fund managers and stockbrokers—does business.

In fact, now that the EC has decided to mint its own money, the rush to adapt to it is already beginning. No industry will be more affected than banking. Analysts see a new wave of consolidations, mergers, and intra-European tieups hitting banks, especially once the



composition of the ECU is deter-
d in 1994. Anticipating that, Bar-
PLC has been expanding on the
inent for a year already, buying pri-
banks in Germany and France to
corporate clients and local money-
agement knowhow. "Monetary
is going to have a very profound
ence," says Paris-based analyst R.
Bugie of Standard & Poor's Corp.
one fell swoop, banks will find it
r to compete across borders as the
-team advantage of national cur-
es disappears. And major compa-
will be able to use two or three
s to handle European business, in-
of the half-dozen or more many
ow. As competition intensifies, rev-
s in one key area—foreign-ex-
ge trading—will shrink as a welter
rrencies becomes one. Belgium's
rale Bank figures this alone will
it up to 5% of its $71 billion annual
ues. "It is a challenge," concedes
Schneider-Lenné, Deutsche Bank's
member for international finance.
we see it more as an opportunity."
me banks are already thinking ECU.
as Capital Markets, the London-
Euromarket trading arm of the
rench bank, has switched its inter-
ccounting to ECUs from dollars. But
iggest battle of all will come as
s begin launching products de-
d for the ECU era. Those that have
dy are finding success. Turin's Isti-
Bancario San Paolo, which operates
rance, Spain, and Italy, already
s a third of its Italian mortgages in
and expects that share to jump to
within two years.

CHANGE. Other hints of what's
d can be found in the stock market,
e a single "Eurotrack" index al-
y follows the ups and downs of the
200 equities trading on several
ses. But the likelihood of one stock
et for all Europe will draw closer
managers of the trillions locked up
uropean pension funds begin switch-
heir accounts and investment strate-
to ECUs. "Just think," marvels San
Executive Vice-President Alfonso
. "It'll be a whole new game."
e European bond market will under-
similar sea change. Although the
bond issuance already is growing at
a year (chart), the market remains
alongside the world's leader, the $6
n one in U. S. Treasury bonds. But
EC members' government debts are
hed over to ECUs, a new market
come alive. Bob Tyley, a Paribas
tal Markets bond expert, estimates
ew market will be worth a stagger-
3.5 trillion, relegating Japan's $2.5
n bond market to third place.
single currency will mean huge
ges for manufacturers, too. Merg-
may become easier: British conglom-

Commentary/by John Rossant

THE EC: FROM HERE IN, NO GAIN WITHOUT PAIN

"Maastricht has been like getting married," says one prominent Italian economist, reflecting on the importance of the agreements reached in the Dutch town on Dec. 10. "Before the meeting, we were passionately in love with the concept of Europe. But now that we're married, the hard work of living together begins."

The metaphor may be a bit stretched. But far from the hoopla of Maastricht, Europeans are starting to wake up to what a unified Europe would really mean. To construct the economic and political powerhouse of 340 million people charted by Brussels, they are going to have to give up a lot more of their cozy habits. Despite the summit's upbeat note, a lot of doubt remains concerning Europe's seriousness about forging ahead. It will only die down if individual countries show a willingness to sacrifice for the greater good.

THE EC FLAG: WILL EVERYONE SALUTE?

In the months to come, skeptics will be watching whether the Germans start to break up the clumsy Bundespost monopoly and give, say, a chunk to British Telecom. They'll see if Paris pulls the plug on state-controlled electronics giant Bull, which ran up $1.3 billion in losses last year. And they'll watch closely as the Italians, whose Europtimism is as strong as their economy's preparation for European integration is weak, face a world in which Milan will wither as a financial center.

GOLD STARS. So far the governments in Rome, Paris, and Bonn have played the pro-Europe card for all it's worth while being less than candid about the downside. That's because Europe has been swept by "1992 fever" since the 1986 decision to go for a unified market by next year. The EC flag with its 12 gold stars flies proudly at factories doomed to extinction by an integrated market. Thousands of workers bound to be laid off in the next few years are flocking to get European Community passports.

From here on out, there's going to be no gain without some pain somewhere in Europe. By one estimate, for example, the EC's 37 locomotive makers will be reduced to fewer than 10 within a decade. And the move to a single currency guarantees a shakeout in financial services.

PLANES, TOO? In the runup to 1992, the Europeans have clung to their old ways. Multibillion-dollar public procurement, which EC members all agree should be opened up, remains as tightly protected as the British crown jewels. Similarly, all support deregulation of air travel, but no country wants to be first to give up its own national airline. And just after agreeing to open up the Continent to more Japanese imports, Europe's embattled and long-protected carmakers are clamoring for a protectionist EC industrial policy.

In the long run, the tough transition to an open market should be worthwhile. If the Maastricht plan works, for instance, Europeans will have not only a common currency but also the world's strongest financial system. European banks and corporations, freed from the narrow confines of individual countries, may gain the competitive edge to hold their own against the U. S. and Japanese.

But that isn't stopping grass-roots opposition to an integrated Europe from spreading across the Continent. You can see it in the eyes of thousands of angry French and Italian farmers as they take to the streets to protest against subsidy cuts. In some cases, like France's extreme right-wing National Front, such protest is explicitly anti-Brussels. In others, such as Lega Lombarda, now the No. 2 political party in most of northern Italy, it's a rejection of free-market and pro-European ideals.

If such trends grow, fears France's European Affairs Minister Elisabeth Guigou, Europe could regress "and face a destructive Balkanization." Europeans would do well to ponder that as they roll up their sleeves for the next phase of integration.

erate BTR PLC, for one, thinks a vibrant ECU market will make it easier to finance acquisitions in Germany and Belgium. And costs will shrink. European businesses figure they will save $15 billion a year on foreign exchange commissions and currency hedging costs. Britain's Imperial Chemical Industries PLC estimates that it alone will save $100 million a year, the equivalent of 1% of its annual European sales. "We see only advantages," says Yves Blanc, finance director of French auto-parts maker Valeo.

As the EC steps up the pressure for open competition across Europe, more customers are starting to comparison-shop for the same products between countries. The present tangle of currencies hides often substantial price differences on everything from autos to computers. ECU price tags would quickly change all that. Indeed, Europe's political leaders will be pushing these and other potential benefits to business and consumers as they promote the Maastricht pact in coming weeks. But they will be less forthcoming about the substantial adjustment pains necessary to make the ECU work. Warns Paribas' Tyley: "The ECU is a clone of the Deutschemark with inflation as its No. 1 focus."

TOUGH RULES. From early 1994, when the countdown to a single currency begins, Europe's policymakers will have to confront a slew of tough economic hurdles. They will need to reduce their inflation rates to no more than 1.5 percentage points above the lowest three members of the EC. Budget deficits will have to be pared to a maximum of 3% of gross domestic product, a target that even anti-inflation Germany, at 5%, now cannot meet. Government debt will have to be pared, too. In fact, Italy and Belgium risk disqualification if they cannot meet this criterion. Staying out of the ECU system could boost Italian interest rates a full percentage point, estimates Daniel Gros, a monetary expert at Brussels' Center for European Policy Studies.

Even thornier obstacles lie ahead. Poorer EC members, including Ireland and Spain, will require substantial financial aid to bring them alongside their richer cousins. The currency could also make it harder for many nonmembers, from Sweden to Turkey and the emerging economies of Eastern Europe, to join the EC. But just as their predecessors did when they got the free-trade bandwagon going, the Maastricht summiteers chose to look beyond such problems. In the end, they figure, they have little choice but to make the ECU work.

By John Templeman and Patrick Oster in Maastricht, with Stewart Toy in Paris, Richard A. Melcher in London, and John Rossant in Rome

SOVIET UNION

A STUNNING COUP: GREETING YELTSIN IN BYELORUSSIA

WILL YELTSIN'S NEW ORDER PUT BREAD ON THE TABLE?

The Soviet empire is dead. A stabler arrangement may be its legacy

It was billed as a Slavic Summit, a weekend confab near the Polish border at a hunting lodge that only recently catered to Communist bigwigs. Worried about the fate of their tightly linked economies as the Soviet Union collapsed around them, the leaders of Russia, Ukraine, and Byelorussia gathered to talk over new political and trade treaties. But when they emerged from seclusion on Dec. 8, they unveiled a stunning surprise: a new commonwealth arrangement to replace most functions of t Soviet Union, which they deemed of cially dead.

No one was more taken aback th Mikhail Gorbachev, whose attempt piece together a new confederation w floundering badly. Even George Bu was told about the deal earlier. On again, Gorbachev was upstaged by Ru sian President Boris N. Yeltsin, who a nounced the new order at a press conf ence. Gorbachev is hanging toug declaring the new commonwealth illeg Some of his aides, meanwhile, are hi ing that he may resign.

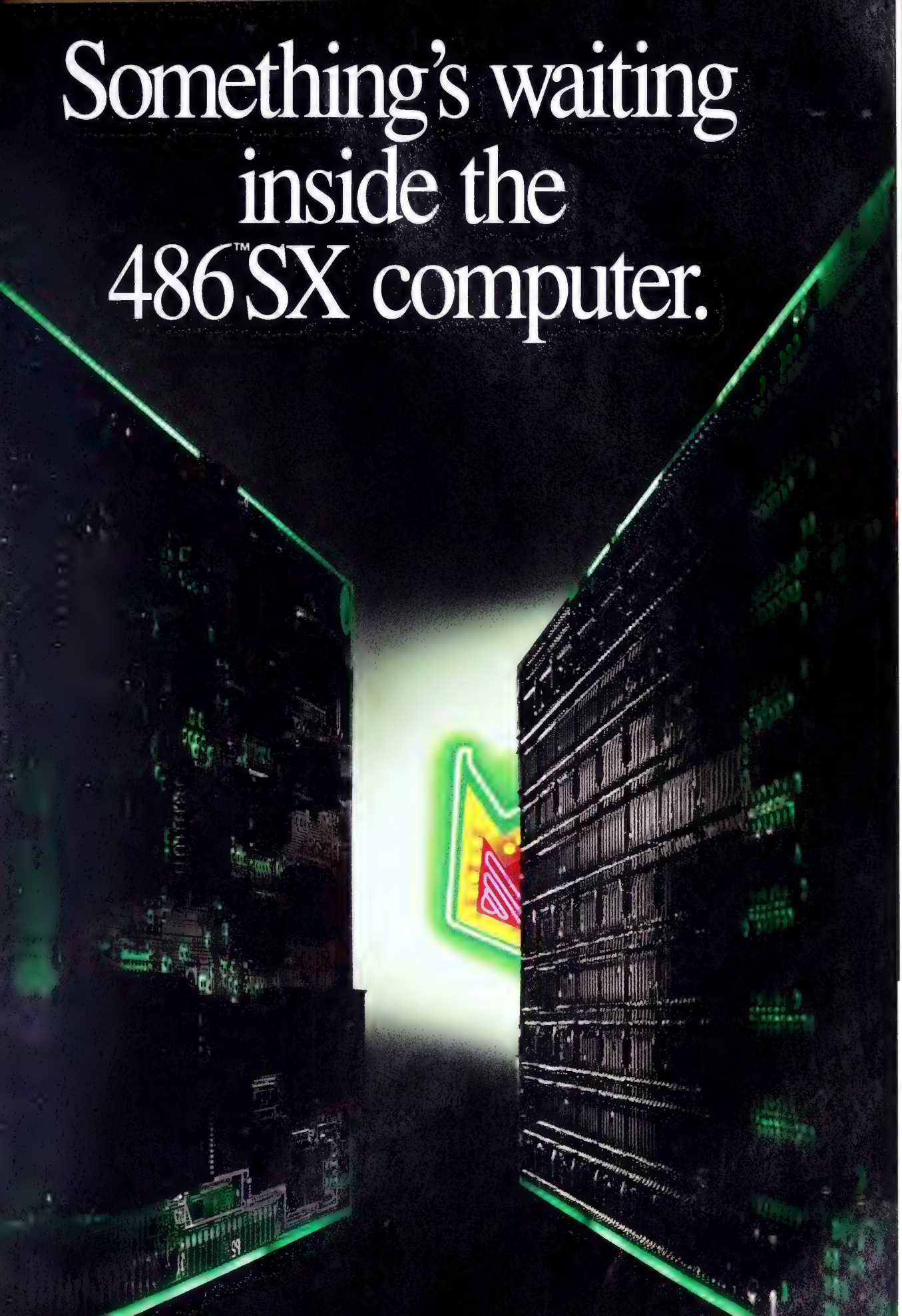
MARKET MOVES. Still, after two years bitter struggle, the new shape of t former Soviet Union may finally emerging. Called the Commonwealth Independent States—so far, consisti of Russia, Ukraine, and Byelorussia the loose governmental structure wou replace the former Soviet Union. It w account for three-quarters of the form superpower's population and more th 80% of its gross domestic product. Mo eled after the European Community, will be a free-trade zone, probably un ed by a single currency—the ruble. T commonwealth aims to maintain a sing NATO-style command structure over armies and nuclear weapons. On pap the plan would deliver the stability th has eluded Gorbachev as he tried bring renegade republics back into t Kremlin fold. But Yeltsin and his

WHAT THE NEW COMMONWEALTH AIMS TO DO

- Repeal all Soviet laws and assume powers of the old regime
- Launch radical economic reforms, including freeing most prices
- Keep the ruble, but allow new currencies
- Set up European Community-style free trade
- Create joint control of nuclear weapons
- Fulfill all Soviet foreign treaties and debt obligations

DATA BW

Something's waiting inside the 486™SX computer.



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horts still face a big hurdle: convincing the fractious army that the plan will prevent political chaos.

The top priority of the commonwealth leaders is to push ahead with the difficult transition to a market economy. They will try to revive the slumping ruble by reining in spending and forging a joint monetary policy. On Jan. 1, the three Slavic states will simultaneously free prices on most goods in a joint plunge into economic shock therapy.

This unprecedented show of economic unity will give the reforms a better chance of success. Already, Ukrainian and Byelorussian parliaments overwhelmingly have endorsed the commonwealth, which will be open to new members from former Soviet republics and even Eastern Europe. Armenia and Kirghizia may be ready to sign on, even though some Central Asian officials, such as Kazakhstan President Nursultan A. Nazarbaev, were miffed because they hadn't participated in the summit.

Even the hint of more stability is stirring interest among foreign investors, who have been spooked by the former superpower's roller-coaster politics. While it's too early to know how the commonwealth will play out, it should clarify investment requirements. "Businesspeople don't necessarily care what the rules are," says Judy Shelton, a Soviet expert at the Hoover Institution, "they just want to know the rules." The prospect of orderly decentralization was good news at Coca-Cola Co., which already had plans to expand in the former Soviet Union through a joint venture in Kiev and a new office in St. Petersburg. The faster a market economy is set up, the faster Coke can replace inefficient state-run producers with its own network.

Even so, the formation of the commonwealth sent shivers through Western capitals over the control of nuclear weapons. And it heightened fears of a second coup attempt. Governments fretted about the viability of their treaties with the superpower, including Soviet pledges to repay some $84 billion in foreign debt.

UPSTAGED: WILL GORBACHEV RESIGN SOON?

The stage was set for the unexpected commonwealth arrangement when Ukrainian voters enthusiastically endorsed forming an independent state on Dec. 1. That dashed Gorbachev's remaining hopes of salvaging the Soviet Union. It also spurred the leaders of the three Slavic republics to start talking over how to prevent total economic collapse.

'INSPIRATION.' The leaders—Yeltsin, Ukrainian President Leonid Kravchuk, and Byelorussian Supreme Soviet Chairman Stanislav Shushkevich—say they arrived at the hunting lodge near Viskuli, a Byelorussian village, with no agenda for a commonwealth. "It was creative inspiration. . . . We came without a text. It was born right there, collectively," says Gennady Burbulis, State Secretary of Russia and a key Yeltsin aide.

Within hours after the new pact was inked, there were upbeat signs. Ukrainian officials stepped up exports of meat, sugar, and vegetables to Russia and Byelorussia. They promised to take down new customs posts that had stymied trade of other key products. They also pledged to create a new central banking system that would institute tight monetary controls to strengthen the ruble. At the same time, Yeltsin delayed freeing prices from Dec. 16 to the first of the year to give Byelorussia and Ukraine time to prepare similar economic moves.

By stepping into the political vacuum left by Gorbachev's weak leadership, Yeltsin and his counterparts hope to head off the growing threat of a second coup or civil war. To win the army over, Yeltsin plans to double military salaries on Jan. 1. On Dec. 11, Yeltsin seemed close to winning over top Soviet military commanders.

The three Slavic states also want joint control over nuclear weapons, which is the issue that has Western governments most concerned. It will be at the top of Secretary of State James A. Baker III's agenda when he visits Minsk, Kiev, and Moscow beginning Dec. 15. He will make it clear that U.S. recognition, aid, and easing of export curbs will depend on how well nuclear weapons are controlled.

THE WEST IS EDGY ABOUT NUCLEAR ARMS

Of special concern to Washington and other Western governments is managing the tens of thousands of smaller, tactical nuclear weapons scattered about the former Soviet Union. They worry that cash-starved former Soviet republics will be tempted to unload weapons or nuclear knowhow in aggressive Third World countries. Already, on Dec. 9, a small nuclear reactor was up for sale on the Moscow International Commmodity Exchange.

Yeltsin and the other Slavic leaders insist that they will stick to all the former Soviet Union's international obligations. That means fulfilling the START and Conventional Forces in Europe treaties, as well as paying back Soviet loans. Such moves will go a long way to keep open credit lines with Western banks and forge new diplomatic ties. Should it survive what may be the worst winter in years, the commonwealth may offer the former Soviet republics at least some hope for a turnaround. Meanwhile, exhausted citizens of Moscow, Kiev, and Minsk can only wait.

By Deborah Stead in Moscow, with Rose Brady in New York, Igor Reichlin in Bonn, Patricia Kranz in Washington, and Walecia Konrad in Atlanta

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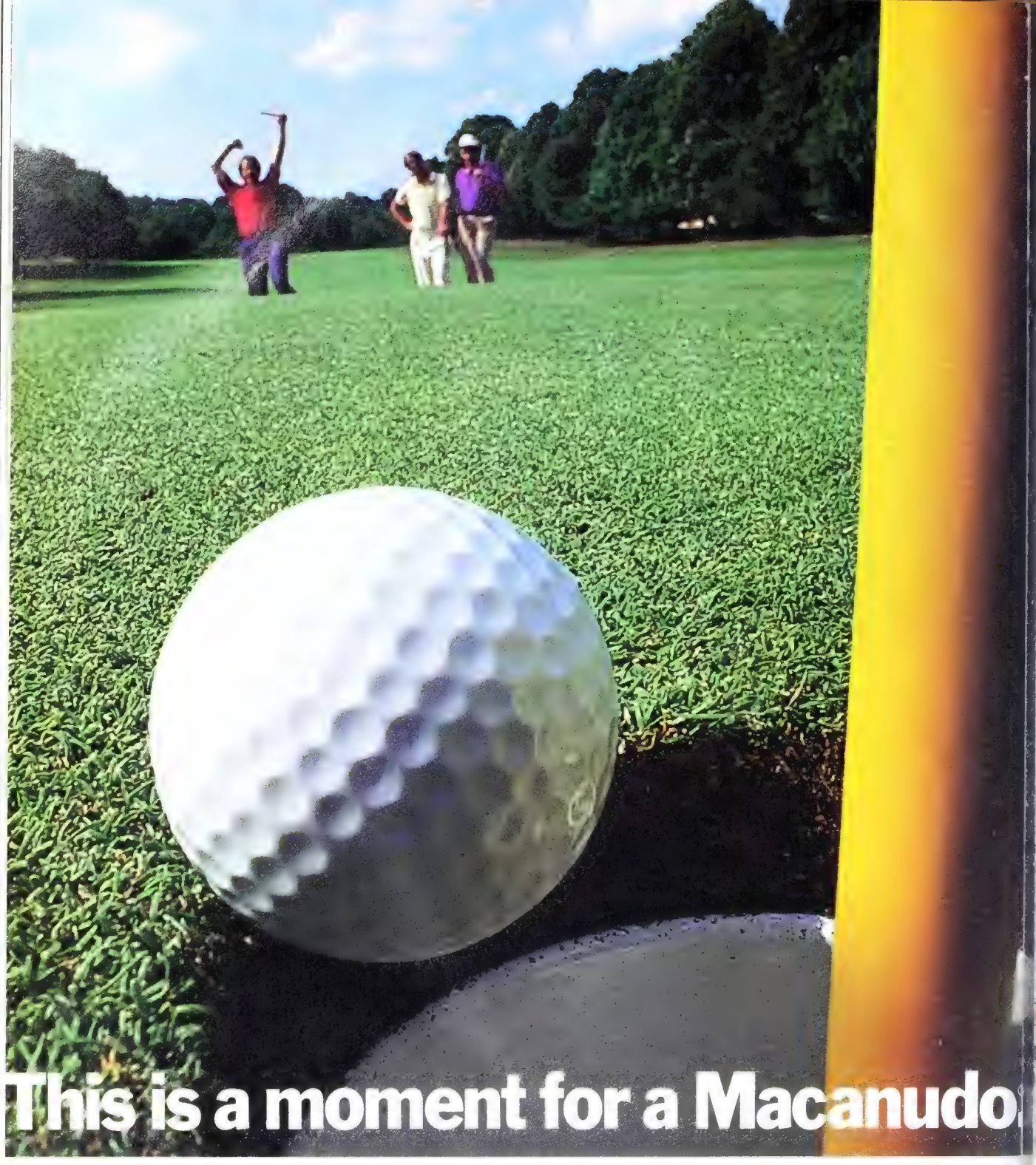

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EDITED BY STANLEY REED

OLAND: CAN 29 PARTIES UN THIS COUNTRY?

uring Poland's freewheeling election campaign this fall, Jan Olszewski, a popular former Solidarity activist, was one of the most avid bashers of the government. Now President Lech Walesa has reluctantly tapped him as e Minister, Olszewski had better take a crash course in ng brickbats. That's likely to be his new role as head of nwieldy five-party coalition government that is now being ed.

verning the increasingly restive de- acies of Eastern Europe is becoming nkless job. In the joyous aftermath e fall of Communism, the region's leaders had little difficulty pushing gh preliminary economic reforms. nese initial measures have ushered in ng inflation and a depression-level neting in output rather than the l-for prosperity

w the makeshift character of these cracies threatens to slow progress as rn Europe begins in earnest to dis- e state industry and its still-intact welfare system. Pressure is rising to ease credit and help failing state prises. If newly elected politicians up too much, however, these coun- risk sliding into Latin America-style inflation. That would discourage ur- y needed investment and derail re- for years to come.

PARTY. Nowhere is this truer than in d, which has been the trailblazer. Under the tough lead- o of Finance Minister Lescek Balcerowicz, the Poles ed 2000% hyperinflation and stabilized the zloty. But since the iron-fisted monetary and fiscal policies have meant for many Poles, and they are taking it out on pro-market cians. In the Oct. 27 elections, pro-reform parties gar- only 22% of the vote. An incredible 29 parties won seats, with none getting more than 13%. Parliament now includes oddball splinter groups such as the Polish Beer Lovers' Party as well as former Communists, who promised to quadruple pensions. "It's a major sign of instability," observes German economist Horst Brezinski. "It reminds us of the Weimar Republic."

Olszewski will sack Balcerowicz and probably try to ease his monetary policies. But rolling back reforms too far would jeopardize Poland's $2.48 billion loan from the International Monetary Fund, which has suspended aid until further discussions with the new government. Endless debate has already damaged Poland's privatization program, which has so far sold only about 20 out of some 7,500 state companies. And a rising budget deficit is helping to keep inflation at 85% in 1991.

POLAND'S PARLIAMENT: SPLINTERED

ANGRY VOTERS. Economic policy is also under fire in Czechoslovakia, where price reforms and rising unemployment are beginning to cut into the Czechs' more comfortable living standards. In next June's elections, angry voters are likely to oust President Vaclav Havel and his associates. "They're going to hang us all," says Deputy Finance Minister Dusan Triska.

Still, few observers expect these governments to do complete about-faces on reform. If they do, they will sacrifice Western aid, and they'll lose ground on their effort to gain admission to the European Community. But there's no doubt that politicians have suddenly become scapegoats for the fallout of 40 years of Communist mismanagement. Those bold enough to persevere with hard-hitting reforms are likely to suffer a high attrition rate.

By Gail E. Schares in Bonn

SAL WRAPUP

EDEN

he Swedish government's decision to hike interest rates a stunning 6 centage points, to 17.5%, in early ember shows that Prime Minister Bildt is committed to a painful, t-money restructuring of the trou- economy. His immediate goal was cotch rumors that the krona might devalued. In the weeks after the % devaluation of the Finnish mark- n November, an estimated $4.3 bil- in flight capital left Sweden. Bildt wants to show his own industrial- and the European Community that vill take tough measures to curb 8% ation and bring Sweden's productiv- ity in line with the EC—rather than go the easy devaluation route. He will likely follow the rate hike with a new budget in January that, among other cuts, clamps down on Sweden's cherished health and child care benefits.

GERMANY

The state phone monopoly, Deutsche Bundespost Telekom, has always been considered off-limits to privatization, but now even some left-leaning Social Democrats see benefits in selling off at least part of it. "We have the first signs from the SPD that a deal might be possible," Free Democratic Party leader Otto Lambsdorff told BUSINESS WEEK. The aim would be to make Telekom more efficient. Its sky-high prices put Germany at a competitive disadvantage. And the plodding giant has been slow to revamp eastern Germany's phone system.

IRAQ

The logjam on Iraqi oil exports could be breaking up. U. N. officials say they will meet with the Iraqis in Vienna on Jan. 6-7 to try to iron out the obstacles to Iraqi oil sales. The Security Council authorized such sales earlier this year, but the Iraqis objected to high pipeline transit fees demanded by Turkey and to other aspects of the U. N. plan. Iraqi exports would further depress the weak oil market.

THIS MARKETING EFFORT HAS L'EGGS

Sara Lee moves beyond food to become a consumer-goods power

Mention Sara Lee Corp. and visions of cheesecake and chocolate brownies immediately spring to mind. But the Sara Lee of the 1990s is as much about pantyhose and purses as it is about pies. Just look at the nonfood brands in the Chicago conglomerate's shopping bag: Hanes men's underwear, L'eggs nylons, Bali bras, Coach leather goods, to name a few.

With lessons learned from peddling pound cakes and pork sausages, Sara Lee has transformed itself into a consumer-products powerhouse with increasingly global ambitions. The metamorphosis is all the more remarkable because most of Sara Lee's food-industry sisters have seen many of their diversification gambits flop. Quaker Oats Co. and General Mills Inc. spent the 1970s moving into trendy consumer businesses—everything from toys to golf shirts—only to retreat when they found themselves unable to cope with such fickle markets.

Sara Lee Chairman John H. Bryan took a less glamorous path. He plowed profits from the company's signature bakery business into prosaic markets such as hosiery, socks, and underwear—markets where competition was spotty, demand extremely predictable, and tastes less fleeting. Sara Lee then used some deft marketing to turn near-commodity items into lucrative franchises with powerful brand images.

Over the years, Sara Lee has refined the approach—and it has proved a profitable one. The company's earnings growth has averaged a brisk 19.1% over the past five years. And during its 1991 fiscal year ended June 30, net income climbed 13.8%, to $535 million, on $12.4 billion in sales.

Now, Bryan has global aspirations for Sara Lee. He has already quietly built up a $3.2 billion business in Europe through acquisitions. Sara Lee now ranks No. 4 among U. S.-based consumer-products companies with operations there, trailing Philip Morris, Coca-Cola, and Procter & Gamble. And it's growing fast. On Nov. 18, Sara Lee acquired Playtex Apparel Inc.—the U. S. brassiere maker with a strong position in Europe—in a deal valued at $590 million. Says Bryan, who's also eyeing markets in Asia and Mexico: "Our mission is to be a premier global, branded consumer packaged-goods company."

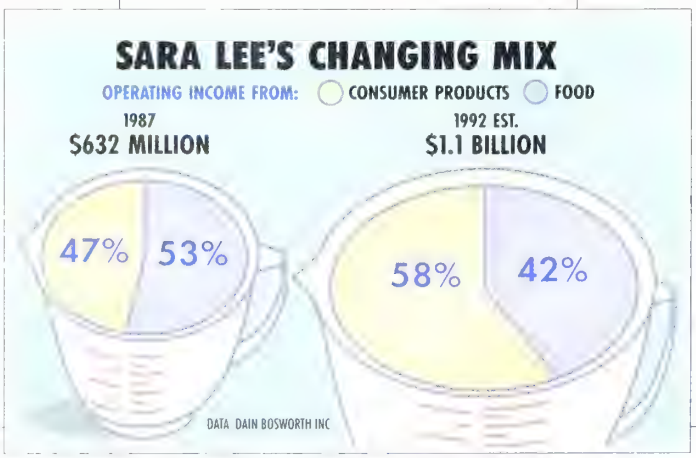
To get there, Bryan will rely on the same marketing recipe that Sara Lee has used to such great effect back at home. Here's how it works: The company zeroes in on a fragmented consumer market, typically dominated by sleepy private-label manufacturers. Bryan buys an existing player or two for quick economies of scale. Next, he works to improve manufacturing productivity. And Sara Lee pours on the advertising to develop a powerful brand image—but prices its offerings competitively.

CASUAL EMPIRE. Sara Lee's push into sweatclothes, T-shirts, and other casual apparel is a case in point. It had a small retail position in the category in the early 1980s. But in 1988, Bryan saw an opportunity to expand dramatically and pounced. That year, Sara Lee acquired a 50% stake in rival Pannill Knitting Co., and a year later it snapped up the rest.

Bryan then quickly converted most of Pannill's products to the powerful Hanes label, the underwear brand the company acquired in 1979. The move significantly broadened the reach of Hanes' prod line—and its clout with retailers. Ne Bryan bought Champion Products I whose upscale brand of sweatcloth and T-shirts extended Sara Lee's pr ence into department stores. After other deal moved it into jersey-knit ite sold through mass merchandisers, B an had assembled a full line of cas wear with a broad retail network.

Competitive pricing is key to Brya strategy, so manufacturing must be zor-sharp. He's reorganizing plant flo so that stitchers work in teams to tu out finished products—rather than usi the old assembly-line approach in wh each worker does the same job on g ment after garment. On average, t switch reduces defects 75% while increasing prod tivity by up to 30%, the co pany says.

Bryan's tactics are gaini Sara Lee a growing posit in apparel markets. The fi year-old Hanes Her W brand has captured 21% the $1 billion U. S. wome and girls' underwear mark vs. Fruit of the Loom's 1 Farley Industries Inc., mak of Fruit of the Loom and B products, still leads in the billion men's and boys' und



With crafty acquisitions, Chairman Bryan has quietly built a $3.2 billion business in Europe

category, with a combined 41% e, but Sara Lee is closing in. Its e has jumped to 28% from 17% in even though Hanes's retail price is t 10% more. "I have great respect Sara Lee and what they've accomed," says William F. Farley, chairof Farley Industries.

all wonder. By the end of its fiscal in June, 1992, nonfood units will in 58% of $1.1 billion in operating ne and 46% of $13.3 billion in sales, es investment house Dain Bosh Inc. That compares with 47% in ating profits and 30% in sales from ood businesses just five years ago t). The shift away from food is hava big impact on Sara Lee's profit gins, too, because returns nonedibles are 62% er than those of food. In Sara Lee's operating gin should reach 8.9% in 1992, says Dain Bosh, up from 7.2% in 1989.

ABRANDS. One reason margins are better in ood businesses is that, verage, marketing costs ower than in food—even ryan steps up the spend-Although Sara Lee's $1.1 n marketing budget is 8.6% of sales, up from 7.3% in 1985, it's still less than half the average for the packaged-food industry.

Much of the credit for those lower costs goes to Bryan's efficient marketing tactics. Once he has latched onto a winning brand, he extends the name to numerous related products. The idea is to make sure that as many items as possible share the glow cast by a strong brand name. For example, since buying Dim, France's leading hosiery maker, in 1990, Sara Lee has sewn the label on men's underwear and T-shirts.

This megabrand strategy doesn't apply to every market, of course. In order to achieve broad distribution of pantyhose, for example, the company had to develop different brands for different retailers. The L'eggs and Just My Size lines found at the drugstore aren't exactly uptown products. So Sara Lee has its Hanes and premium Donna Karan brands for the department-store crowd.

Even unrelated brands get some marketing benefit from being in the Sara Lee stable. Cross-promotions are the key. For instance, a package of L'eggs hosiery may contain a $1-off coupon for a Hanes sweatshirt. And Sara Lee has customized similar programs for big customers such as Kmart Corp. "I think it makes a lot of sense because the products complement each other," notes Joe Tripoli, Kmart's senior menswear buyer.

Overseas, Bryan wants to expand his underwear and hosiery lines into worldwide franchises. Take Playtex. By combining Playtex with Bali, Sara Lee controls 25% of the $1.4 billion U. S. bra market and is a major force in Europe. Now, Sara Lee is negotiating to buy several Asian hosiery makers and aims to double Far East sales, to $1 billion, by 1995.

Surprisingly enough, the architect of Sara Lee's shift toward packaged goods is a food marketer from way back. Bryan joined Sara Lee, then called Consolidated Foods Corp., in 1968, when it bought his family's Mississippi-based meat company. In 1975, the 39-year-old Bryan took over as Consolidated's chief executive—and he quickly started reshaping the company.

LESS FAT. Bryan, now 55, isn't letting his food operations languish. In the U. S., he is squeezing more profits out of the bakery and meat lines through improved operating efficiencies. And catering to the health-conscious, Sara Lee has rolled out a new line of low-fat desserts. But Bryan still covets the European market. His $2 billion European food operation, which sells coffee, tea, nuts, and snack foods, should see relatively rapid growth thanks to budding local appetites for branded packaged foods. Sara Lee is already Europe's No. 2 coffee company with such brands as Douwe Egberts and Van Nelle.

Despite such efforts, Sara Lee's opportunities in food may well remain more limited than in pantyhose and underwear. But Bryan isn't complaining: With plans to stretch the likes of Hanes and Playtex around the world, he's got more than a full plate.

By Lois Therrien in Chicago

A RECIPE FOR MARKETING SUCCESS

- **Target** markets dominated by private-label goods
- **Snap** up huge market share and capacity through acquisitions
- **Use** resulting economies of scale to keep costs—and prices—low
- **Forge** strong brand identities with extensive marketing
- **Sell** through as many distribution channels as possible

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3 Separate I/O board for potential enhancements and ease of service	Yes	No	No	No	No
4 [illegible] cable-lock provision	Yes	No	No	No	No
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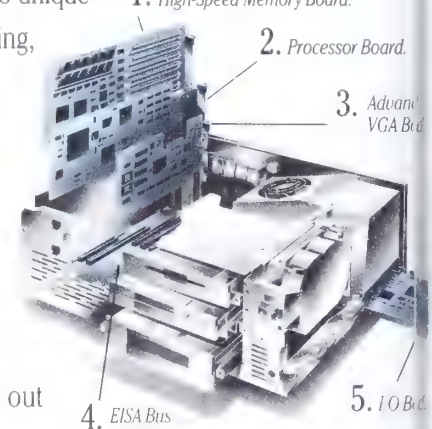

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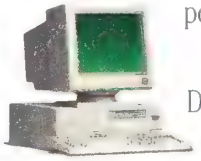

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THOROUGHBRED RACING

ARAZI WINNING THE BREEDERS' CUP JUVENILE: THE DAY'S HANDLE WAS $67.6 MILLION

HORSE SENSE OR HORSEFEATHERS?

Investors like John Kluge are betting that racing's wild ride is over

It doesn't get any better than the Breeders' Cup for fans of Thoroughbred racing. More than 66,000 crowded into Louisville's Churchill Downs on a cold Saturday early in November for the Super Bowl of horse racing, a slate of seven races, each offering a purse of at least $1 million. Attracted by the likes of 2-year-old speedster Arazi, whose win in the Juvenile made him the winter-book favorite for 1992's Kentucky Derby, bettors at Churchill and at offtrack sites throughout North America wagered a record $67.6 million. Recession be damned—that's a stunning 22% increase from the 1990 Breeders' Cup total.

The wagering was inflated by a lottery-like, high-payoff Pick 7 bet that Churchill was trying for the first time, so the one-day numbers hardly represent a trend. But an optimistic group of contrarians believes the Breeders' Cup success and a firming of prices at recent horse auctions may mean the Thoroughbred market is touching bottom. "This will be a leaner but stronger industry in five years," says Christopher Scherf, executive vice-president of Thoroughbred Racing Assns., which represents 55 tracks.

Leaner no doubt, but not without a good deal of pain. Caught in a cost squeeze, a dozen or more racetracks have closed or are expected to halt live racing in the near future. Prices breeders get for top yearling racing prospects are down to nearly 50% from the 1984 peak (chart). And stud fees commanded by the top stallions have fallen from around $400,000 per breeding season four years ago to $225,000 today.

No wonder this year's Thoroughbred foal crop will be the smallest in mo than 10 years. "Breeding got out of co trol," says University of Louisville ec nomics professor Robert G. Lawrenc Simply put, too many marginal mar were bred to nondescript stallions du ing the go-go '80s. Now, says Lawrenc "a lot of [their offspring] are going n where but into a can." A dog food ca to be precise.

Harshly put, but true. And it's ju the kind of story Carl C. Icahn likes hear. The New York financier is one the more prominent contrarians bettin big bucks that the bottom may be nea Others include billionaire John K Kluge, rap star Hammer (formerly M. Hammer), and Campbell Soup Co. he ess Charlotte C. Weber. "To me, it's lik when junk bonds got too cheap," say Icahn. "I like to buy things when peop are throwing them at you."

The argument for a turnaround go like this: There no doubt will be few races, but better-quality horses will b running in them for higher purse Horse owners in 1990 collected $710 m lion in purses, up 71% from a decad earlier (chart). The payoff promises grow even more as the industry turns simulcasting—closed-circuit race tel casts beamed from one track to othe around the country. More simulcastin means bigger betting handles and fatte purses, which equal about 8% of all do lars bet. And the bulk of those fatte purses are going to winners of stake races, the sport's high end. Next ma come national betting pools.

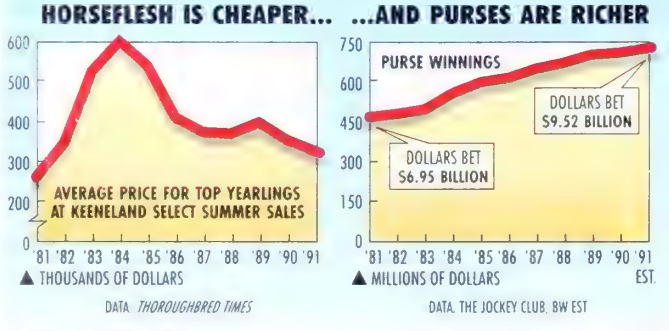
FEVERISH SHEIKS. After they add all tha up in the margin of *The Daily Racin Form*, contrarians conclude that th free-fall in horse prices is near an en "I'm seeing signs of stability for th first time since the mid-80s," says Ru sell B. Jones Jr., a Pennsylvania hors man who heads Metromedia Chairma Kluge's Morven Stud farm in Virginia

If Kluge makes money racing Tho oughbreds, he'll be an exception. Hors experts say that it costs a minimum o $15,000 per year to cover the overhea of training and boarding a racehors But 1990 Jockey Club stati tics show that 86% of th 89,722 Thoroughbreds tha raced that year earned les than that amount in purs winnings. Worse, 14,32 horses didn't earn a dime.

Pure economics mattere little in the fevered hors market of the late 1970s an early 1980s. That's whe Sheik Mohammed al Mal toum and his three brother who collectively rule Duba

RAILBIRD ECONOMICS

HORSEFLESH IS CHEAPER... ...AND PURSES ARE RICHER



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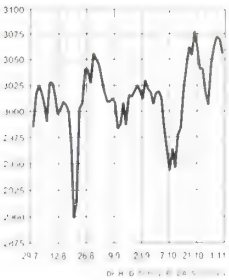
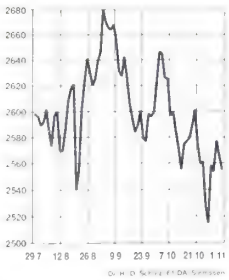


Dow Jones Industrial Average



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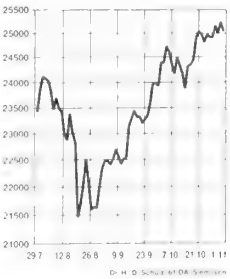

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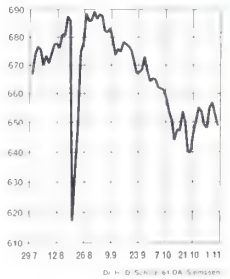

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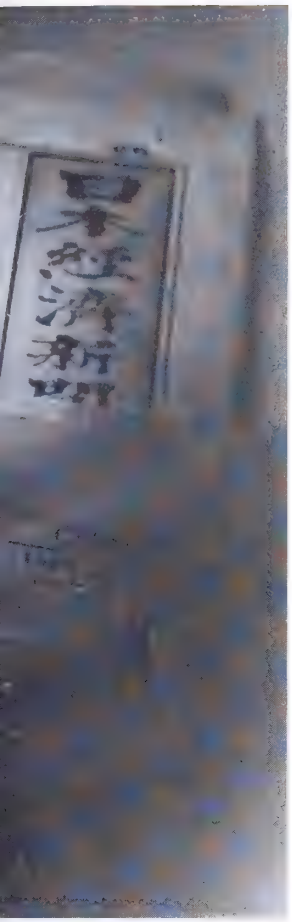

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began their U.S. buying spree. Many breeders acted as if the Maktoums and other high rollers would keep bidding up prices forever. When the big buyers pulled out of the market or slashed their spending, the breeders got scorched.

The Maktoums still account for about 40% of the spending at the top auctions, but Anthony Stroud, racing manager for Sheik Mohammed, says his employer has developed restraint. "If [horses] are overpriced, we won't buy them," he says.

That newfound caution wasn't in evidence when Maktoum paid Allen E. Paulson, chairman and chief executive officer of Gulfstream Aerospace Corp., a breathtaking $10 million for a 50% stake in Arazi before the colt won the Juvenile on Nov. 2. Paulson cites that sale and his purse winnings to refute charges that he overpaid in building his $150 million breeding and racing operation, headquartered at Brookside Farms in Versailles, Ky. "I'm doing better than a 10% return on capital this year," he says.

BAD BUY. Icahn, too, insists that his Foxfield Farms, also in Versailles, is profitable. He entered the business in 1985, teaming with breeder Peter M. Brant to pay a record $7 million for the mare Miss Oceana. Bad mistake: That sale marked the peak in mare prices. Icahn says he now buys only bargain high-end mares and he has enough brood mares to turn out 40 to 50 yearlings per year, selling for $50,000 to $250,000 each. "This is strictly a money-making business for me," he says.

In the end, the health of the Thoroughbred industry will depend on boosting the betting handle. It now tops $9.2 billion a year nationwide, but it's growing more slowly than other forms of wagering, especially casino gaming. That's why Churchill Downs President Thomas H. Meeker and others are lobbying for a national version of the Pick 7 bet that sparked the surge in wagering at this year's Breeders' Cup. Bettors in 29 states laid down $8.5 million on the Pick 7. No one selected the winners of all seven races, but 29 bettors in four states did get six right and took home about $225,000 each for a $2 wager.

An industry committee is now considering a national Pick 6 wager. It could involve a weekly, hour-long syndicated TV show featuring six big races from tracks across the U.S. Racing purists disdain the plan as nothing more than a national lottery. But if such a wager can generate handles as high as the one at the Breeders' Cup, contrarians could prove to be correct even faster than they imagined. Of course, the pessimists still greatly outnumber the optimists, but, hey, that's what makes horseraces.

By Chuck Hawkins in Louisville, with Richard A. Melcher in London

Commentary/by Peter Coy

CABLE TV: FOR A BETTER PICTURE, TRY COMPETITION

Bob Friedhoffer, a professional magician, has nothing on Manhattan Cable TV when it comes to making things disappear. Static obscures the broadcast channels that he gets via cable, especially the lower numbers. Channel 2, the CBS Inc. affiliate in New York, is "painful to look at," he says. "I get better picture reception on my radio." His prescription for cable television: "First, a big sledgehammer."

That's a bit overheated. Most subscribers to Manhattan Cable TV and other systems around the country have decent service. A recent *Consumer Reports* readers survey found that three-quarters were very or fairly satisfied. Still, plenty of people are squawking about high prices and poor service. And that has caught the ear of lawmakers, who know that Americans take few things more seriously than television.

So far, though, the debate over cable TV has produced a picture as fuzzy as the one on Friedhoffer's screen. Every couch potato has an opinion on cable TV. And so does every lobbyist for a phone company, TV network, movie studio, or newspaper, because the cable TV fight is pivot bigger battle over who owns an mits information and entertainme America's homes.

What's the answer? In a nutshe competition. Monopolies made sens communications networks were spe in function and too expensive to du No more. The technologies that telephones and cable TV are conv And it's becoming cheaper to op channels to the home via fiber-opt satellites, and wireless systems t semble cellular-phone networks. the cable monopolies, and the te monopolies as well. With all obsta moved, homeowners early in the r cade could receive TV on a foot-squ ellite dish. Or plug their TV i upgraded telephone line. Or hook the cable operator. Or even get TV fashioned way, by broadcast. Mea phone calls could arrive via the company, cable TV company, or v network provider.

Healthy competition isn't an au result of deregulation, as recent s richly demonstrates. Since Congr

rates for most operators at the
986, cable companies have had
virtually to themselves. From
il October, 1991, the govern-
ble TV price index rose 53.4%,
twice the 24.3% overall rise in
r prices. Consequently, the
solidly behind reregulation, and
ponsors are seeking enough
reregulation to override a Presi-
to.

e regulation is at best an inter-
n. It conjures up a cumbersome
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gh to placate regulators. In con-
able operators were disciplined
tition, they would have to do
job or risk losing the business.
avy train would be gone," says
Egan, an economist at Columbia
school.

ue, then, is how to foster that
ompetition. Here's one way, a
lowers fences around markets

tone," by which they could relay to customers a menu of TV programs from other sources. The FCC plan would give viewers more choices: Cable operators now often refuse to carry any program that might steal viewers from another program that they own or control. Phone companies, in contrast, would be "common carriers," obligated to transmit for a standard fee any program that someone wants to send.

But providing a video dial tone would require billions of dollars in new optical fibers and electronics, and some phone companies say they're not willing to do it if all they can do is transmit programs. The real money, they say, is in owning those programs. So:

■ **Let phone companies own their own programs.** Phone companies might turn out to be flops at creating or buying shows, but they should be allowed to try as long as captive phone customers don't have to foot the bill. Such subsidies would be easy to detect as long as the Norman Lear wannabes are sealed off in subsidiaries. To make sure that phone companies have plenty of channels available for outside programmers, there should be limits on how many channels they can fill with their own shows.

■ **Lessen government's role in phone companies' investment decisions.** Under traditional rate-of-return regulation, governments have an incentive to discourage phone companies from spending heavily on wires that can carry television. Why? Because phone companies are allowed to earn a certain profit percentage on their investments in plant and equipment, and every dollar spent on infrastructure inflates the rate base used in the profit calculation. Given a fixed rate of return, more investment means higher rates.

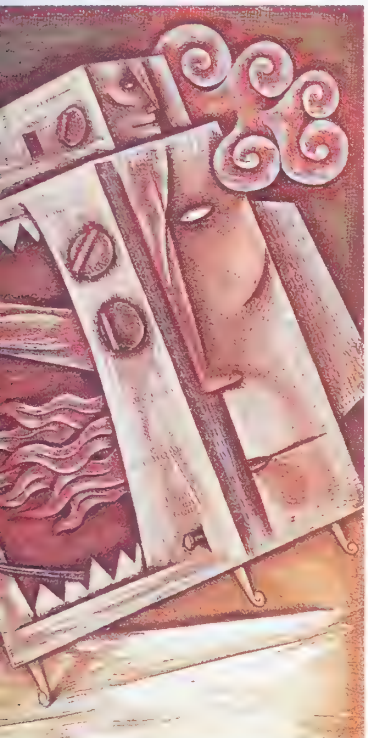
Wisely, many states and the federal government are moving toward capping prices rather than profits. In a pure price-cap regime, regulators don't care how much phone companies invest or earn in profits as long as they meet benchmarks for price and service. Economists agree that price caps aren't ideal, but during the transition to full competition they're the best way to protect consumers while modernizing networks.

■ **Open the way for cable companies to offer telephone services.** Delivering phone calls would be relatively easy for advanced cable systems that have lots of fiber capacity and two-way communications. Others will take longer. Letting cable companies into the phone business would partially compensate them for the loss of their monopolies. It would give consumers another choice in telephones. And it would put the phone companies on notice that they can't overcharge their customers with impunity.

■ **Ease municipal franchise requirements for providing video service.** Municipal franchises have become unholy alliances: Cities get lucrative fees, and officials who award franchises may get fat campaign contributions. In return, cable operators get impenetrable monopolies. Congress should require cities to justify any rejection of applicants for additional franchises. If cities still balk, abolish franchise requirements and let cities make up some of the lost revenue with a small tax on video transmission.

■ **Investigate whether cable operators are violating antitrust laws by withholding popular programs.** Cable operators have a huge advantage over new entrants, because they can withhold access to such mainstays as CNN, HBO, Showtime, and MTV that they own or control. Requiring cable companies to sell programs to competitors could violate their First Amendment rights. Still, it seems fair to examine whether the cable industry is engaging in illegal monopolistic behavior. This is mainly a short-term issue, since rivals should eventually be able to create their own CNNs and MTVs.

It may take a decade or more before all barriers are breached, but in time these measures will give competition a real chance to produce lower prices, better service, and a good picture on Channel 2 for Bob Friedhoffer.



WHAT'S ON THE TABLE

CABLE TV REREGULATION

A bill sponsored by Senator John C. Danforth (R-Mo.) and others would let local governments regulate prices for basic cable TV service and make it harder for cable operators to deny rivals the use of programming that they own or control. There is a similar bill in the House. The Bush Administration has threatened a veto

PROMOTING COMPETITION

A bill sponsored by Senator Conrad Burns (R-Mont.) and others would let phone and cable companies into each others' markets, and would mandate that the U.S. be fully equipped with high-speed communications by the year 2015. Similar bill in the House

VIDEO DIAL TONE

The Federal Communications Commission proposes letting phone companies carry programming owned by others. It's also considering whether phone companies should be allowed to own programming

DATA: BW

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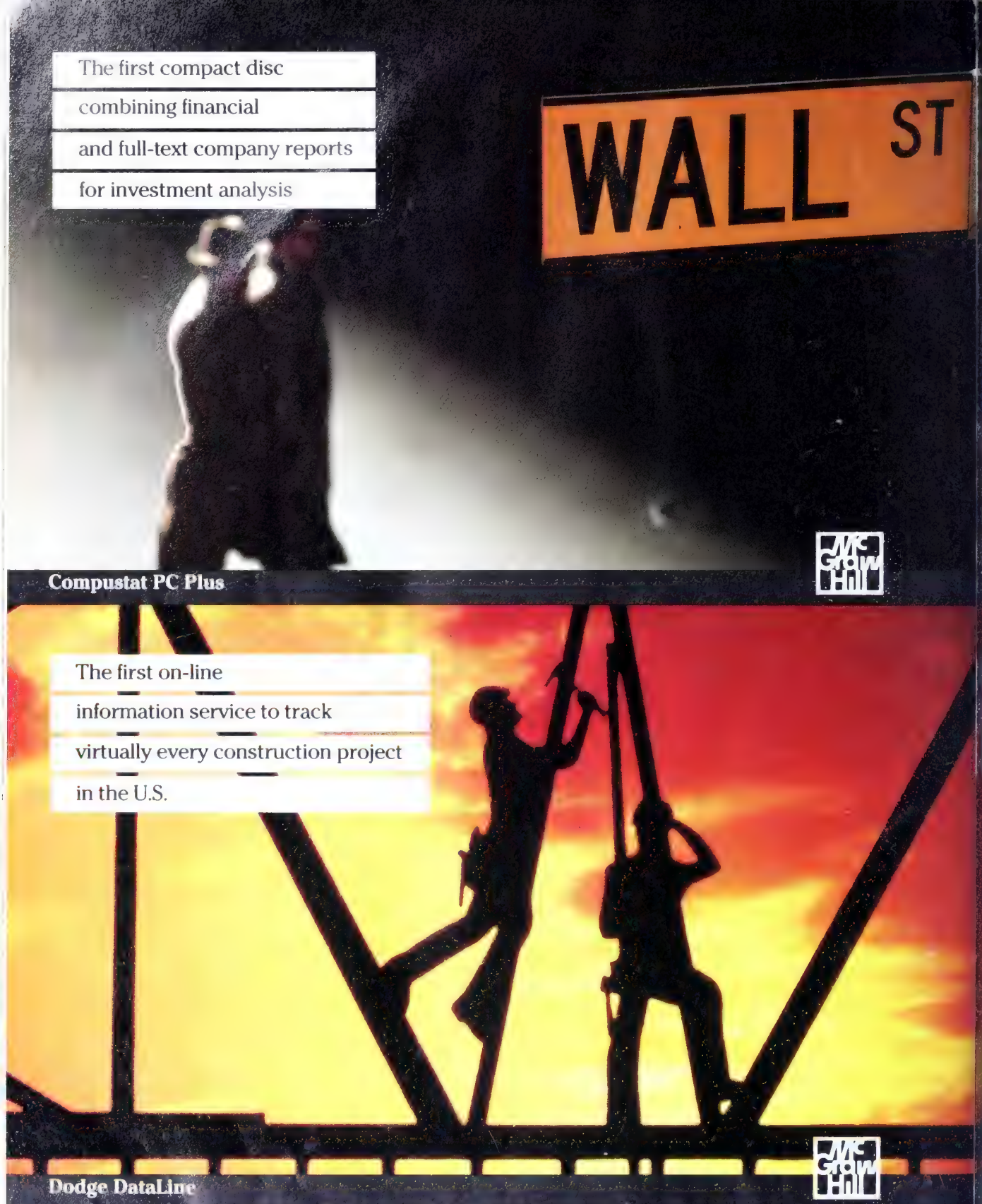

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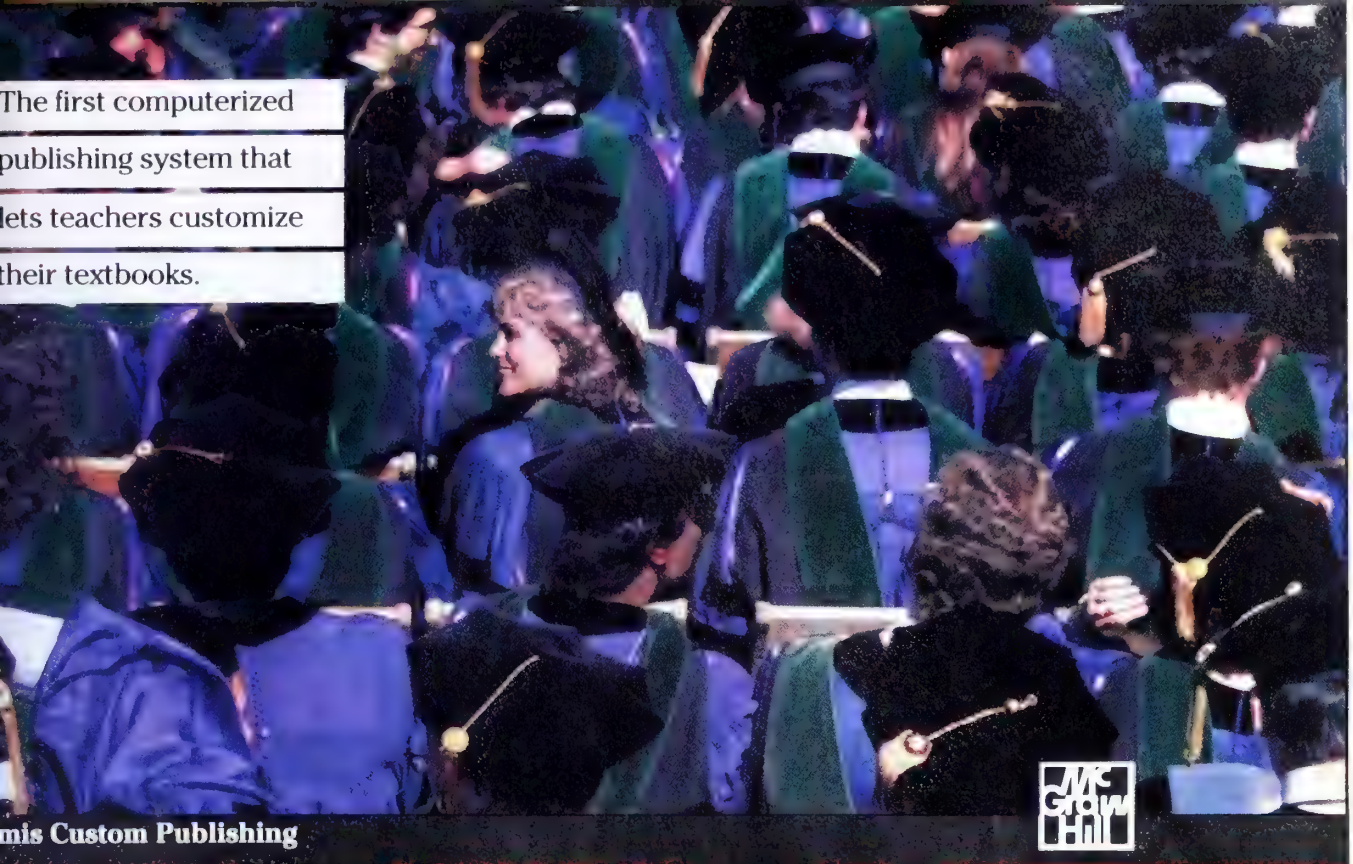
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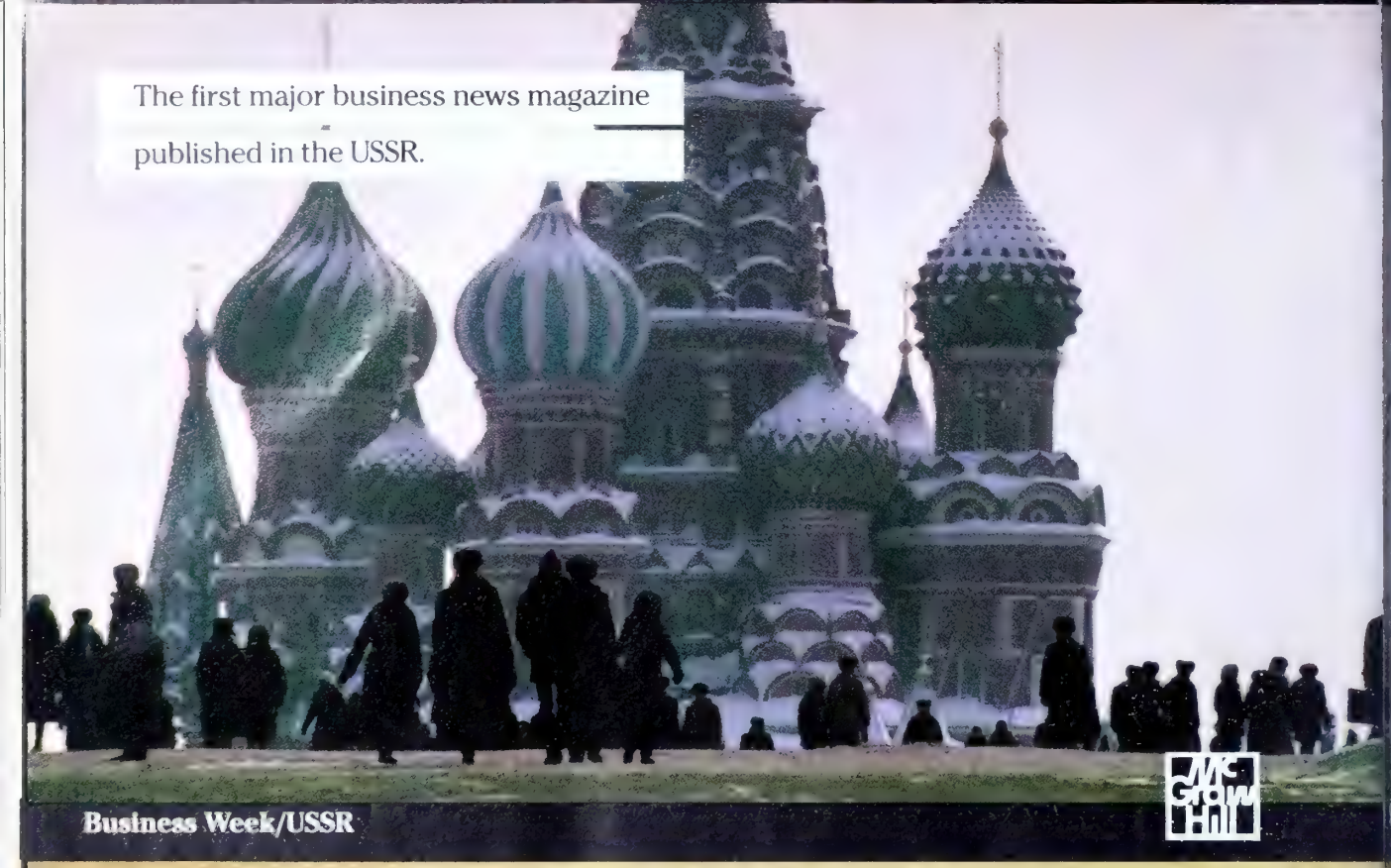

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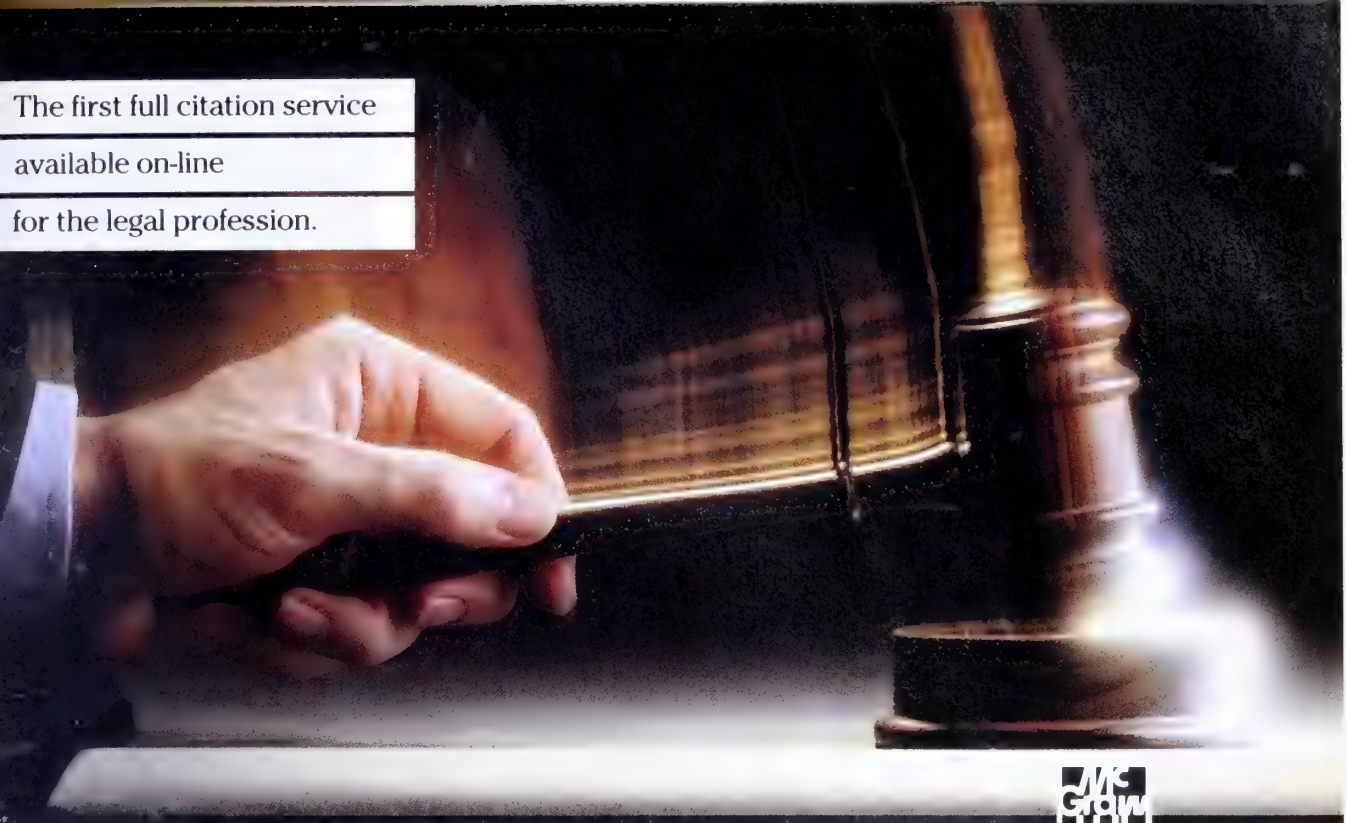

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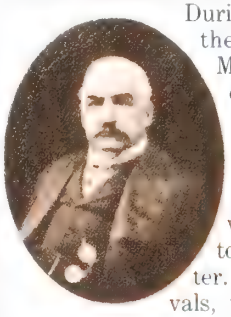
MIGHTY MORGAN

HOW THE BANK IS REMAKING ITSELF FOR THE '90s



During the late 1980s, the venerable J. P. Morgan & Co., a preeminent power in banking almost since its founding by John Pierpont Morgan in 1861, was widely thought to be dead in the water. Compared with rivals, then eagerly building up their loan portfolios, the bank appeared to have become a sluggish also-ran. Critics said Morgan was too set in its pinstriped ways to survive the rough and tumble of the changing financial marketplace.

Today, the House of Morgan has recaptured much of its former glory. While rivals are reeling from lousy loans and struggling to replenish their capital, Morgan is stronger than ever. Morgan Guaranty Trust, Morgan's primary banking subsidiary, is the only big U. S. bank to retain an AAA from credit-rating firms. Its capital cushion is the envy of the industry. And Morgan, the nation's third largest bank, is reporting solid earnings—up an astonishing 79% in the third quarter, making it the most profitable major U. S. bank. For the full year, some analysts say earnings could approach $1.4 billion, up 36% over 1990.

While other major banks, notably Citicorp, are retrenching, Morgan is expanding both its overseas and U. S. operations. Last May, to cite just one in a recent flurry of international deals, Morgan underwrote the first bond offering for a private Latin American company since the Third World debt crisis began in 1982, a $425 million private placement and Eurobond issue for Cementos Mexicanos, the Mexican cement maker.

Morgan's current success, however, is the product not of a mere revitalization but of a complete remaking, even redefinition, of the institution. Morgan has transformed itself from a conventional commercial bank into a European-style universal bank, combining commercial and investment banking and trading functions. Analysts now view Morgan as one of a handful of firms that will dominate global finance in the 1990s.

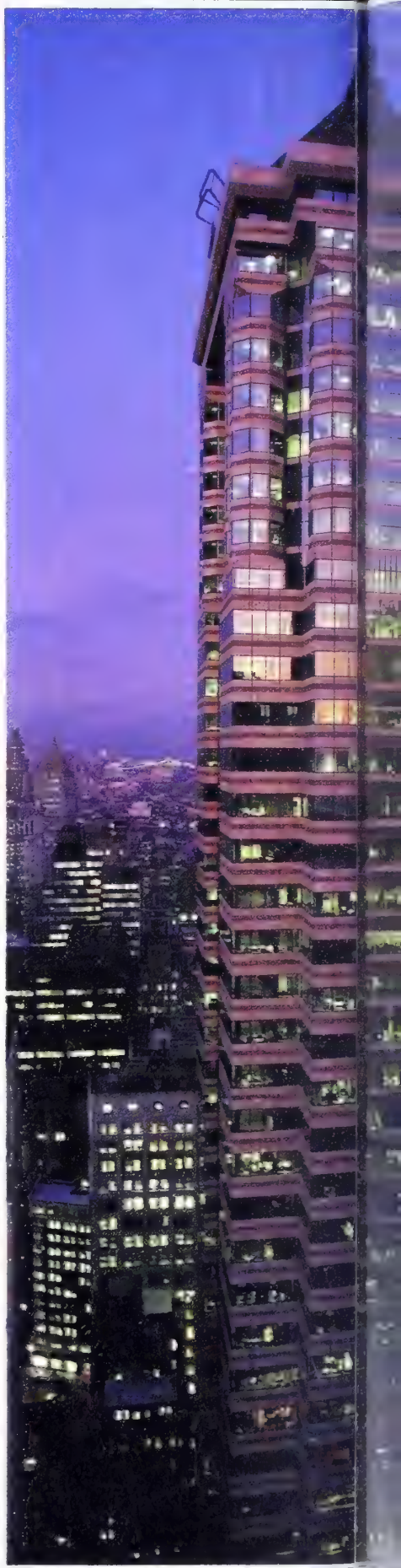
Typically, Morgan accomplished this transformation with little fanfare. Yet in an unprecedented series of interviews with BUSINESS WEEK, usually reticent Morgan executives conceded that the process was long and painful, to the point that some questioned whether the bank was making serious mistakes along the way. Some at Morgan were disturbed by the bank's decision to stay on the sidelines while other big banks rushed into seemingly lucrative real estate and leveraged buyout loans—a move that at the time hurt the bank's earnings but now looks farsighted.

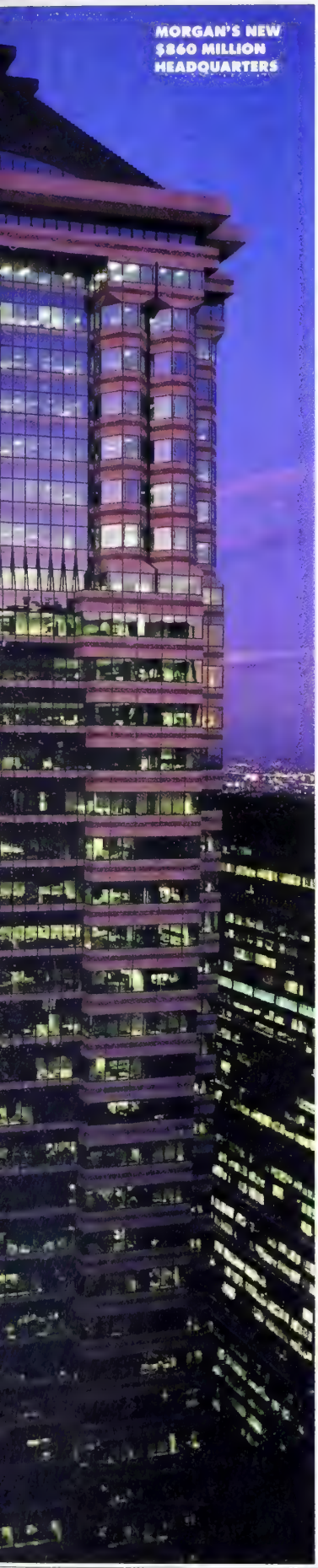
At the same time, competing banks and Wall Street firms contended that Morgan had lost its edge. "It was worrisome," says Morgan's Chairman and Chief Executive Dennis Weatherstone, recalling those bleak days. "But we were building for the future. We had to tough it out."

Especially controversial was the belief by Morgan executives that the bank could become a tougher competitor while preserving what executives term its "values," which emphasize teamwork, capital strength, fastidious attention to client needs, a long-term approach to strategy, and, above all, tradition. Says one former executive: "There's a sense that there really was a Mr. Morgan."

OVERSEAS PUSH. Old J. P. would have been proud of how Morgan's strategy is working. The Cemex issue is only one of several splashy international loans Morgan has arranged lately. In October, Kuwait asked Morgan to arrange a $5.5 billion loan to help pay off war debts. Saudi Arabia reportedly asked Morgan to arrange a similar $3.5 billion credit earlier in the year, though neither the bank nor the Saudis have confirmed it.

Dealmaking is only part of its overseas push. Morgan is now the only institution that is a primary government bond dealer in all seven major industrial-





MORGAN'S NEW $860 MILLION HEADQUARTERS

ized countries. One-third of the bank's professional staff are non-U. S. nationals, while three of its top five executives are foreign-born. Weatherstone himself is a native of London. "I don't think anyone is as strong globally," says Prudential Securities Inc. analyst George Salem.

Now permitted by the Federal Reserve to underwrite both stocks and bonds, Morgan is going head-to-head with Wall Street's investment banking firms and trading houses. J. P. Morgan Securities Inc., the bank's subsidiary, has sprinted from 10th place in 1990 to 7th in underwriting U. S. corporate debt, behind such old hands as Merrill Lynch, Goldman Sachs, and the bank's distant cousin, Morgan Stanley. "We may be the new kid on the block," Weatherstone says, "but even considering that, we've done reasonably well."

Morgan has also emerged as a premier trading institution. Attracted by the bank's sterling credit rating and global reach, an increasing number of chief financial officers are turning to Morgan to arrange complex currency and interest-rate swaps. In the third quarter, Morgan's trading revenue jumped 32% from a year ago, to $396 million.

Whether Morgan can build on its recent success over the next few years is far from clear, however. Wall Street will not easily relinquish its turf to interlopers. Nor will the major overseas banks.

'FRUSTRATION.' More fundamentally, competitors claim, Morgan is too staid and conservative. While Morgan executives take pride that they have been able so far to preserve their traditional ways, there is a debate within the bank over whether some changes may be necessary. Morgan Vice-Chairman Roberto G. Mendoza, who heads the bank's mergers-and-acquisitions activity worldwide, confesses to a "frustration." While Morgan's conservative values are winning the bank a lot of business, he acknowledges that the bank is forgoing a lot of other business with smaller, often riskier companies. "We're torn," says Mendoza. "There are more opportunities than our philosophical commitment to quality allows us to do."

The tension between old values and new opportunities has been part of the remaking of Morgan ever since the new strategy was hatched in the early 1980s by Lewis T. Preston, then the bank's

THE BANK DID NOT CHANGE WITHOUT GOING THROUGH A LOT OF EXECUTIVE SOUL-SEARCHING. "WE WOULD ALWAYS ASK OURSELVES, 'ARE WE DOING THE RIGHT THING?' THE ANSWER WAS YES"
CHAIRMAN WEATHERSTONE

imperious chief executive and now president of the World Bank. At the time, Morgan's big clients were turning away from mundane bank loans and instead doing their borrowing in the financial markets. "We had a choice of changing the clients we did business with or changing the institution," recalls Douglas A. "Sandy" Warner III, Morgan's president. Preston decided that Morgan should be able to provide all their clients' financial needs.

In 1985, as the volume of dealmaking began skyrocketing, Preston tapped the Cuban-born, Yale-educated Mendoza, then head of capital markets, to build an M&A team. In accordance with Morgan tradition, the bank decreed that Mendoza should choose most of his staff from within the bank. Morgan has always believed that extensive hiring from the outside can damage its unique cultural fabric. That was even more crucial now, since the bank was facing wrenching structural changes. Morgan loan officers thus were instructed in the art of mergers and acquisitions. Treasury-bond traders learned about underwriting. "I'm a big believer," says Weatherstone, "that there isn't any task we can't handle because of the kinds of people we hire." Mendoza concedes that "we could have made a more immediate impact" if the bank hired from outside. "It was a question of short-term and long-term."

Preserving collegiality has long been a key facet of Morgan's culture. New recruits must complete a 10-week training course that covers everything from capital markets to corporate history. The program is intended to impart a sense of the Morgan mystique, but it also allows young executives to develop an in-house network of contacts. Those connections come in handy, since Morgan professionals are frequently rotated among jobs and country assignments. "You get close to people when you spend upwards of 18 hours a day with them," says Arthur Sculley, head of Morgan's private bank.

After graduation, the bank works hard to maintain the team atmosphere.

Morgan provides a free lunch for staffers in the bank's dining room to encourage employees to spend time together. New bank officers are invited for informal chats with senior executives, who talk about their experiences at Morgan. Intramural competition, which has led to star systems at other institutions, is actively discouraged. "If you are not part of the team, you will suffer" financially and career-wise, says Walter A. Gubert, the Italian-born executive who heads Morgan's London office.

Morgan's camaraderie, and its strategy to convert itself into a universal bank, were increasingly tested as the Roaring Eighties progressed. Corporate America was slow to call on Morgan for corporate finance work. The bank still had no underwriting capabilities in t U. S., and Morgan's level of expert was wanting when compared to the lik of Goldman, Sachs & Co.

At the same time, many large co mercial banks were prospering. M lenders booked huge profits on comm cial real estate and leveraged buyo lending. Morgan shied away. The ba was shifting resources into trading a the securities business. Moreover, it h learned some bitter lessons from lendi to Third World countries, which c Morgan, and many other big banks, lions. Morgan executives felt real est and LBOs entailed more risk than th wanted to assume. "We were doi some of those loans," says Weath stone. But "it was important for us hold on to our triple-A."

DEFECTIONS. Some Morgan executiv though, became frustrated with the sl pace of progress. "It wasn't easy," sa Vice-Chairman Kurt F. Viermetz. "The were big discussions about how long should wait." Weatherstone ackno edges that there was a lot of so searching: "We would always ask o selves, 'Are we doing the right thin The answer was yes."

Ultimately, a few old Morgan har who disagreed resigned. Others fou comfortable niches elsewhere in t bank. "A lot of old-timers went to p vate banking, where they still talk abo the old bank says one form executive.

> 'WE'RE TORN. THERE ARE MORE OPPORTUNITIES THAN OUR PHILOSOPHICAL COMMITMENT TO QUALITY ALLOWS US TO DO'
> VICE-CHAIRMAN MENDOZA

Critics outs the bank to pleasure in poi ing out that th were few sig Morgan was m ing any headw Morgan, thou not only persis but kept spend lavishly on strategy. To be more competitive w Wall Street, the bank boosted salar and bonuses to $1.1 billion in 1989, most double 1985 levels. Morgan a built a new granite-and-glass headqu ters up the block from its former imp ing digs at 23 Wall St. The 47-st building, complete with miles of fib optic cable and three state-of-the- trading rooms, was considered a nec sary expense. But Wall Street wags, r ing the structure's $860 million price t labeled it Morgan's "Taj Mahal."

The skepticism reached its peak j as Weatherstone took over from the tiring Preston on Jan. 1, 1990. Ten d after he became CEO, Morgan announ a 1989 loss of $1.3 billion, vs. a $1 bill profit in 1988. Much of the red

ned from huge reserves set aside st Third World loans.

1990 unfolded, however, every- started to come together for Mor- While other banks were writing off s of dollars of bad real estate Morgan was emerging as one of afest and strongest financial insti- s in the world. The AAA rating t had so tenaciously clung to was y intact. Only 2.5% of Morgan's are nonperforming, vs. 6.6% at oth- ney centers.

rgan's impeccable balance sheet ecame a key competitive lure to rations and governments. In Latin ica, Morgan has become the clear r in M&A. y own the et," says one eting bank- Of every 10 deals done in America, I ln't be sur- d if they'd eight of "

'WE HAD A CHOICE OF CHANGING THE CLIENTS WE DID BUSINESS WITH OR CHANGING THE INSTITUTION' **PRESIDENT WARNER**

rgan is just minant a financial force in the Mid- East. When it scouted around for to rebuild, Kuwait was besieged offers from 70 banks around the . Ahmad Abdul Qader, head of the it government debt office, says an was chosen because of "pricing, ofessional team to manage the action, and the high caliber of pro- nals within the bank." Competi- however, say Morgan's lofty credit gave them an edge. "Their bal- sheet played a key role," says a who bid for the Kuwait business. cknowledges that his own institu- has "a lot of other baggage. In the nt climate, that hurts."

rgan has also built on historical re- ships in Europe. In France, where an's ties go back 125 years, where pulled off a coup in June by under-

writing a $1.5 billion zero-coupon bond issue for the French government, the first such zero that has ever been issued by France.

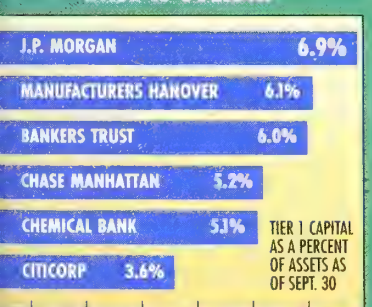
GROWING FAST. Morgan is also pushing hard to win more business in Asia. Its recent deals range from advising the Saudi Arabian Oil Co. on its purchase of 35% of Korea's Ssang Yong Oil Refining Co. to helping Sony Corp. acquire a 310,000-square-foot plot of land near the Berlin Wall for Sony's European headquarters. Morgan has assembled a task force to prospect for opportunities in more difficult Asian markets, such as China.

Now that it has won securities powers in the U. S., Morgan is quickly expanding its activities at home. In 1989, Morgan was one of a dozen U. S. banks allowed by the Federal Reserve to underwrite corporate debt issues. To exploit this, Morgan once again has assembled a homegrown underwriting team, drawing on its experienced hands in London. Says Ramon de Oliveira, head of Morgan's high-yield debt and equity underwriting business: "We're not completely new babes in the wood."

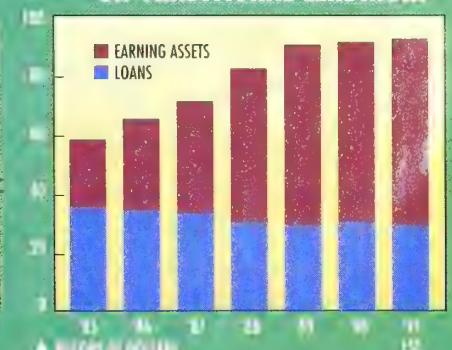
Morgan has been quite successful in attracting underwriting business from its large roster of blue-chip clients for whom it has long provided commercial banking services. The list includes the cream of Corporate America, such as PepsiCo Inc. and Procter & Gamble Co. "We've had a connection with Morgan for over 30 years. We know them, and they know us," says Arnold Henson, chief financial officer for American Brands Inc. American Brands hired Morgan to lead a $200 million bond issue last

WHAT MAKES MORGAN A STANDOUT

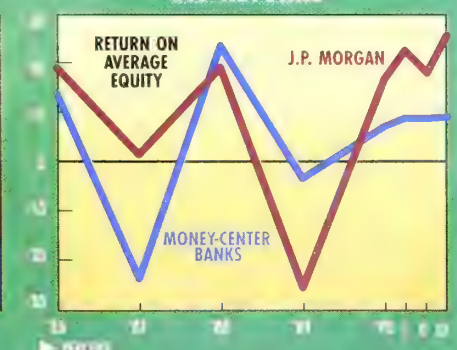
MORGAN'S CAPITAL BASE IS SOLID...



...ITS PROFITS DON'T DEPEND ON TRADITIONAL LENDING...



...AND IT'S NOW SHOWING BIG RETURNS



PHOTOGRAPH BY PETER GREGOIRE CHART BY ERIC HOFFMANN/BW

A CEMEX PLANT IN MEXICO: MORGAN IS A DOMINANT FORCE IN LATIN AMERICAN FINANCE

MORGAN'S FLURRY OF INTERNATIONAL DEALS

- Handled $1.27 billion municipal bond offering for New York City
- Arranged $5.5 billion loan syndication for Kuwait to repair war damage
- Underwrote $425 million offering for Mexican cement maker Cemex, the largest debt issue for a Latin American company since 1982
- Organized $1.5 billion zero-coupon bond offering for French Treasury, the first such issue by France
- Advised PepsiCo on acquisition of 70% of Gamesa, a Mexican cookie maker
- Co-led $250 million Eurobond issue for Nippon Telegraph & Telephone, the first time NTT picked a foreign underwriter

DATA: J.P. MORGAN & CO., BW

September. It was one of the few times that Morgan Stanley has not led an issue for the tobacco and liquor producer.

Translating these deals into huge profits has been more of a problem. Although catering mostly to big, affluent companies commands a lot of attention, making deals with smaller, often riskier companies produces bigger profit margins. "The high-rated market is a little more peaceful," says one banker. "It looks good on a tombstone, but it doesn't generate much money."

Morgan, further, has had trouble breaking into equity underwriting, which the bank was granted permission to do in September, 1990. Many chief financial officers believe Morgan is too green. Although it has participated in 46 underwritings, Morgan has yet to lead a deal. Colgate-Palmolive Co. Treasurer Brian J. Heidtke, whose company included Morgan in an underwriting syndicate for a $460 million equity offering in November, doesn't put Morgan in the league of a Goldman or Merrill yet. "It's a matter of experience and track record," he says.

> MORGAN HAS EVEN BEEN CONSIDERING A MERGER, WHICH WOULD HAVE BEEN UNTHINKABLE ONLY A FEW YEARS AGO

Sales is another weakness. Morgan's ability to place a stock issue internationally is unparalleled, but CFOs say its domestic capability is relatively weak. "They didn't know the buyers as well," says Richard F. Pops, president of Alkermes, a Cambridge (Mass.) biotechnology firm. Morgan co-managed an $18 million equity offering for Alkermes last July. Though he was pleased with Morgan's work, Pops points out that the bank had no "recognized analyst" to track the stock and maintain interest.

Morgan's investment banking activities, in fact, have played only a small role in the bank's recent bountiful profits. The incredible third-quarter results, say analysts, derived in large part from the precipitous decline in interest rates. Not only did the steep yield curve create a volatile trading environment, but it also greatly lowered Morgan's cost of funds. Unlike other banks, which depend on deposits for funds, Morgan borrows short-term money from the market and then lends long-term. When rates decline, the spread creates a windfall for the bank. Its net interest revenues rose 26%, to $392 million. But corporate finance fees slipped 10%, to $52 million. Morgan doesn't disclose underwriting fees.

Still, Morgan's steady advance has begun to worry Wall Street. At a time when the volume of corporate finance work is down, Morgan's gains are coming at the expense of established firms. And many are crying foul. They argue that Morgan can raise funds more cheaply in the marketplace because, as a commercial bank, it can readily borrow from the Fed if it runs into trouble.

Some Wall Streeters have even alleged that Morgan, as well as such other banks as Bankers Trust, uses strong-arm tactics to win business. In September, John S. Tamagni, chairman of the Securities Industry Assn.'s Investment Banking Committee, testified before a congressional committee that there is "quid pro quo" at work: To receive a loan from certain banks, a corporation must hire the banks for corporate finance work. In the past, the SIA has lobbied for legislation that would have restrained the ability of banks to lend and underwrite at the same time.

The real barriers to Morgan's future progress are likely to be cultural, not legislative. There are many signs that the bank is taking a much more venturesome and imaginative approach to getting new business. A 10-person group, for instance, is seeking to expand business with midsize companies.

A STEADY PACE. Even Morgan's private bank, once considered the last vestige of the Old Morgan, is showing a new competitive vigor. No longer content with serving just blue-blood families, the bank is actively going after the *nouveaux riches*. It has opened offices in California and Florida as well as in such overseas cities as Milan and Madrid. Still, Morgan's minimum requirement for clients is $5 million. Since 1987, the private bank has doubled assets under management to $22.6 billion. Scully hopes to maintain the same pace of growth over the next five years.

Morgan's management under Weatherstone is also showing unusual flexibility in plotting the bank's future. Morgan has even been willing to consider a merger, which would have been unthinkable a few years ago. "We've run the numbers on all the major banks where we thought a merger would offer some potential," says Weatherstone, without identifying any institution. So far, however, Morgan has decided to go it alone. "Nothing makes sense at this point

herstone says. But he adds that remain open-minded."

ase Manhattan Corp. was one of banks Morgan studied earlier this , according to banking sources. e's upscale corporate business was as a clean fit with Morgan's. More- the sources say, some executives Morgan were intrigued by Chase's business, whose deposits could provided a source of funds to d against an upturn in rates. But executives rebelled at the notion of getting into retail banking, which is alien to Morgan's other operations.

Despite these indications that Morgan is willing to at least tinker with J. P.'s legacy, critics claim that ultimately the bank's ingrained conservatism, its fundamental aversion to risk, will limit its ability to be a major financial player as the 1990s evolve. Weatherstone disagrees. He argues that after the excess of the 1980s, plenty of clients will want to deal with a firm like Morgan. "Yes, we are conservative, and we do have a set of values, and that should scare [competitors]," he argues. "We're not street fighters, but we have a lot of very competitive people here." Above all, he insists that his bank's core values won't have to change. In the intensely competitive 1990s, the perpetuation of J. P.'s august legacy will hinge on whether Weatherstone is right.

By John Meehan in New York, with Richard A. Melcher in London, Stephen Baker in Mexico City, Ted Holden in Tokyo, and bureau reports

WEATHERSTONE: NOT YOUR TYPICAL MORGAN MAN

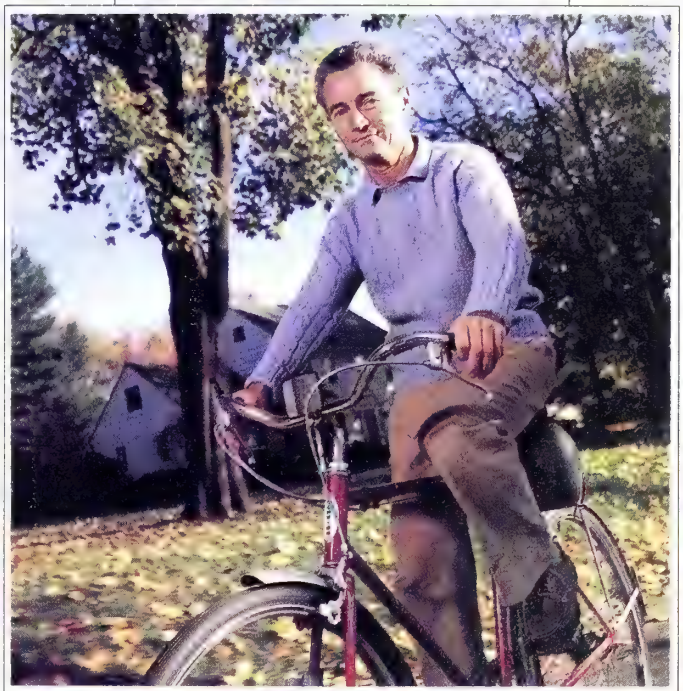
t first glance, Dennis Weatherstone seems almost indistinguishable from his patrician decessors. J. P. Morgan & Co.'s lat- chairman and chief executive has ed a lifetime—45 years—at the k. Weatherstone moves in social les befitting the head of an elite itution. His friends include H. wster Atwater Jr. of General Mills and other CEOs of blue-chip compa- . Last year, Weatherstone even t his predecessors one er: He was knighted by en Elizabeth II.

ut on closer inspection, atherstone is anything a cookie-cutter version typical Morgan banker. f-made and unpreten- s, Weatherstone, 60, through the Morgan ks without the benefits social privilege or Ivy gue degrees. The son of lerk for London Trans- , he grew up in the mid- class London borough of ngton. He joined the k when he was 15 and nded night school for years to get a college- ree equivalent. "I needed weekends just to catch on the homework," re- s Weatherstone, a slight- built man who speaks a soft British accent.

M MAN. As Morgan fin- s its second year under atherstone, now a U. S. citizen, it's r that the boss's mild manner has duced subtle changes in Morgan's rating style. Unlike the previous , Lewis T. Preston, whom many ffers considered aloof, Weather- e is warm and accessible. A father our, he is more apt to inquire about health of staffers' families. "To the side, it's imperceptible that things e changed," says one former executive. "But it's clearly a little less austere under Weatherstone."

Morgan's CEO prefers a team approach to decision-making. "I'm more inclined to work things out by consensus," he acknowledges. That has led to a higher profile for Morgan President Douglas A. "Sandy" Warner III. At 44, Warner, a 23-year veteran, is widely believed to be Morgan's next CEO when Weatherstone retires in five years.

When Weatherstone first took over, his consensual approach was seen by some critics as a sign of weakness. That, in turn, prompted unkind comparisons with Preston, an ex-Marine who ruled Morgan with a firm hand until 1990. But the bank's current CEO sees no reason to change his ways. "To many people, [Preston] had a stronger presence," says Weatherstone. "I'm not sure there's a huge amount of difference in the final result."



"I'M MORE INCLINED TO WORK THINGS OUT BY CONSENSUS"

Unlike most Morgan bankers, Weatherstone came up through the trading instead of the lending side of the bank. He started as a bookkeeper in the London office of Guaranty Trust, which later merged with J. P. Morgan. He entered everything in the bank's ledgers by hand. By his early twenties, Weatherstone was on the foreign exchange desk, where he was eventually noticed by Preston, who became the London office's general manager in 1967.

LONG VIEW. Although traders traditionally have a short-term outlook, Weatherstone was seen by superiors as a strategic thinker. "He's penetrating in his observation and analysis, whether he's looking at what the Deutschemark will do today or how an industry will perform over the next five years," says Sir David G. Scholey, chairman of Britain's S. G. Warburg Group PLC and a friend of Weatherstone's for 25 years.

In 1971, Weatherstone became head of Morgan's foreign exchange trading worldwide in New York. After Preston was named CEO in 1980, Weatherstone continued his rise. In 1986, he became president and helped mastermind Morgan's difficult transformation to a European-style universal bank.

Weatherstone, whose family lives in the same Darien (Conn.) house they bought when they moved to the U. S. in 1971, sees little reason to change his low-key management. And for good reason. Judging by Morgan's recent success, Weatherstone's common touch is helping create uncommon returns for an increasingly uncommon bank.

By John Meehan in New York, with Richard A. Melcher in London

JOHN T. ABBOTT

***DAILY NEWS* LOBBY: THE PAPER MAY NOT SURVIVE**

AN EMPIRE UP FOR GRABS

Untangling Robert Maxwell's holdings may take years. But that doesn't scare some bargain hunter

If there was a driving force behind Robert Maxwell's life, it was a lust for fame. Whether he was riding to the rescue of New York's *Daily News* or flying off to aid famine victims in Ethiopia, Maxwell always thrust himself into the limelight.

Well, he'll be remembered all right—but as one of the most brazen crooks in a brazen era. Maxwell, 68, may have defrauded his two publicly traded companies of at least $1.4 billion, mainly by filching money from the companies' employee retirement funds, before his mysterious death at sea on Nov. 5. Plundering the pension funds seems to have been a last-ditch effort to shore up his web of private holdings, which were collapsing under huge debts (table).

As accountants and government investigators sift through his tangled and largely bankrupt empire, attention is turning to a host of thorny questions, most having to do with how he got away with it. Why did such venerable financial institutions as Lloyds Bank PLC and Goldman, Sachs & Co. give advice or lend millions to a man once branded by the British government as unfit to run a public company? How did British financial regulations allow Maxwell to conceal his legerdemain from creditors and shareholders? And what happens to his properties, which include Britain's *Daily Mirror* tabloid and U. S. book publisher Macmillan Inc.?

The last question may be the easiest to answer. Plenty of suitors have already come forward for Maxwell's plum media assets. And they may be able to buy at prices much below what Maxwell paid for them. Trouble is, they may have to wait a while. For one thing, it's not clear yet exactly who owns what. Already, banks and pension funds are claiming some of the same Maxwell shares. That's because Maxwell put the shares owned by pension funds of his public companies as collateral for loans to his private holdings.

Prospective buyers will want to make sure their assets don't have any hidden financial holes from Maxwell's plundering. Mortimer B. Zuckerman, publisher of *U. S. News & World Report*, says he would like to bid for the *Daily News*, which filed for bankruptcy protection the day after Maxwell's private companies. But, he cautions: "I don't know much about their current liabilities."

ckerman may be leery. But three pean players are less shy: They're ying to buy Mirror Group Newspa- Ltd., Britain's second-largest news- r chain and the most solvent part of well's portfolio. The most likely win- s conglomerate Pearson PLC. Mirror p's market value was $900 million trading in its shares was suspend- n Dec. 2. With Maxwell's looting of ension fund, analysts now predict it fetch $700 million.

ss certain is the future of flagship well Communication Corp., which rols Macmillan, Official Airline es Inc. (OAG), and Berlitz Interna- l Inc. MCC says it has no plans to or bankruptcy, although Maxwell's company loans have deprived MCC 40 million on top of its $2.5 billion in debt. To keep afloat, MCC is asking s to swap $1.3 billion in debt in n for preferred stock. But publish- executives familiar with MCC predict l file for bankruptcy in as little as weeks.

IBLE BID. If that happens, Macmil- and other assets could go to the st bidder. For now, industry insid- give the edge to K-III Holdings, a a company backed by Kohlberg is Roberts & Co. K-III, which paid million for Rupert Murdoch's U. S. zines in May, is headed by William eilly, a former president of Macmil- Three other top K-III executives come from Macmillan. A K-III esman declined to comment, but one shing executive familiar with the any says K-III has hired invest- banks for a possible bid.

e recession has pummeled the s of media properties, so Macmillan inly won't fetch what Maxwell paid in 1988. Industry insiders say it command $1.7 billion. That's far than the $2.6 billion Maxwell for it, although he later sold off ral subsidiaries.

so unclear is the future owner- of the profitable Macmillan/ raw-Hill joint venture in educa- l textbooks. Joseph L. Dionne, man and chief executive officer cGraw-Hill Inc., which publishes NESS WEEK, says he is happy its current level of investment. blishing executive familiar with venture says McGraw-Hill is un- to buy out Macmillan's 50% e. But the executive says raw-Hill would consider offers other suitors for its own stake. e fate of the *Daily News* is . The paper's unions are work- with Maxwell's son Kevin on a ganization plan. But former Pub- r James Hoge says the *News* will ive only if Kevin withdraws and a owner gives the unions an equity stake in return for concessions. Given the ad slump, some analysts don't even think that would save the paper.

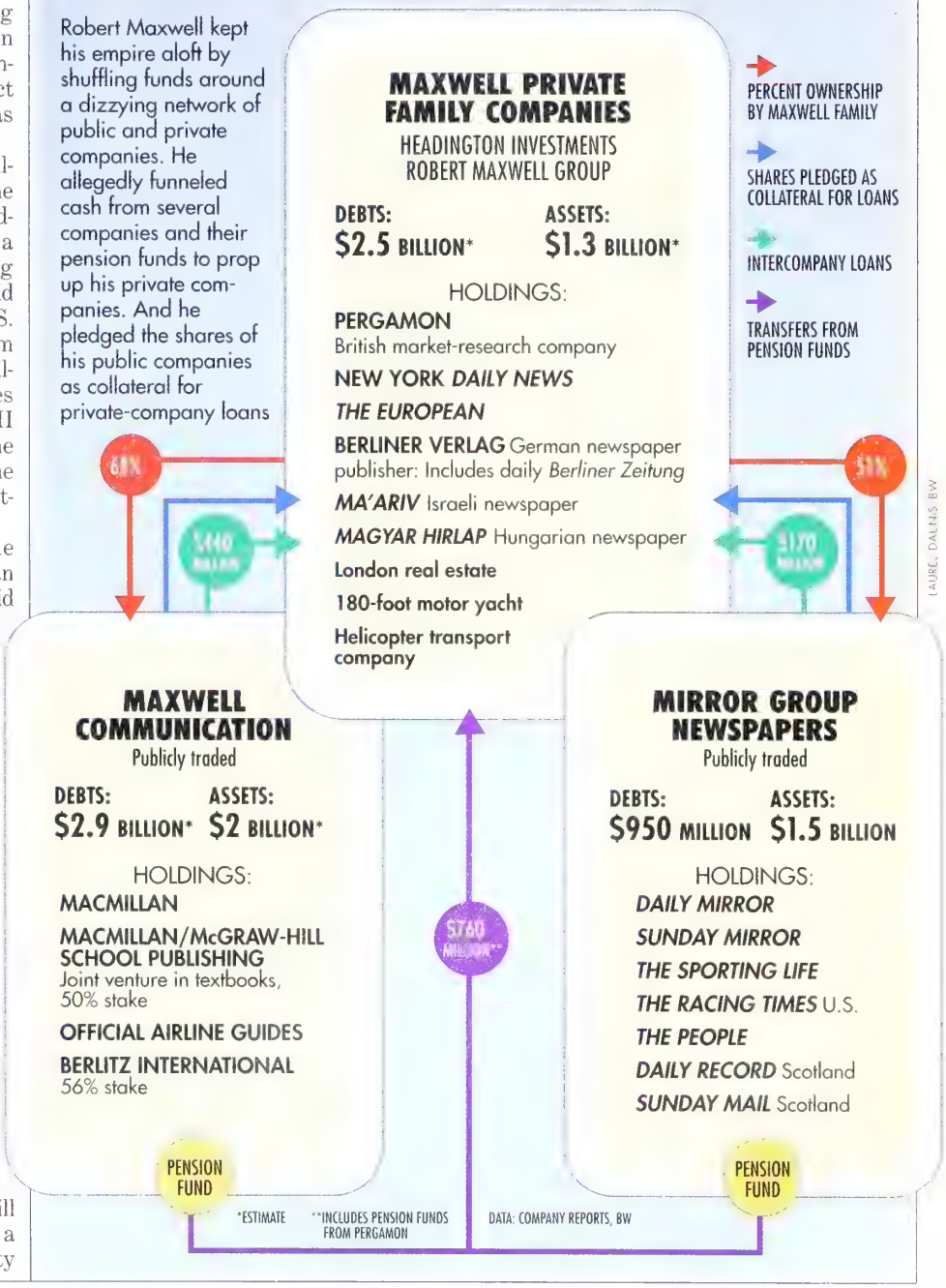
As arduous as all this may seem, it's easy compared with the task of reconstructing Maxwell's financial dealings. Regulators and executives at Maxwell's more than 25 banks, who face losses of at least $2 billion, are still struggling to understand how such a massive fraud could occur. Part of the explanation lies in the nearly absolute power Maxwell had. With his domineering personality, subordinates didn't ask questions when he ordered funds shifted.

Maxwell also took advantange of Britain's lax pension-fund rules. Unlike the U. S., even large pension funds in Britain don't require independent trustees or outside custodians. Instead, trustees are simply importuned to invest prudently. That's the sort of vague language Maxwell capitalized on: He shifted management of most pension-fund assets to Bishopsgate Investment Management Ltd., a company he controlled. Bishopsgate then used the assets to buy stakes in MCC and Mirror. And Maxwell "borrowed" $760 million in the form of shares and cash from that company.

Still, even with no government regulation, Maxwell would have been able to

HOW MAXWELL BUILT A HOUSE OF CARDS

Robert Maxwell kept his empire aloft by shuffling funds around a dizzying network of public and private companies. He allegedly funneled cash from several companies and their pension funds to prop up his private companies. And he pledged the shares of his public companies as collateral for private-company loans



LAUREL DALIN/ BW

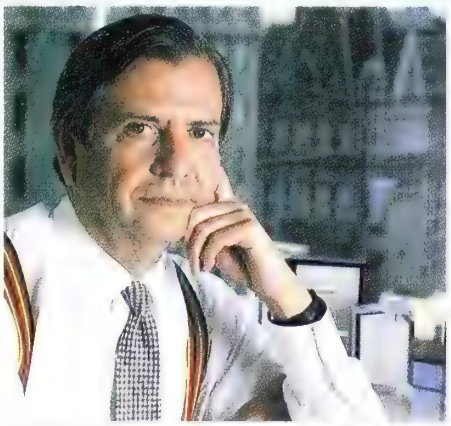
do little without the willing aid of his bankers. Amid all the caterwauling over debts and assets, Maxwell's banks are doing some painful soul-searching. "We have to look more closely at the people running a business and at its finances," says one banker nursing big losses.

Indeed, Maxwell's banks displayed a cavalier disregard for his checkered reputation. Maxwell first ran afoul of British regulators in the late 1960s with his management of publisher Pergamon Press Ltd. A British government investigation uncovered a pattern of questionable dealings between his private companies and publicly traded Pergamon.

Just as in the current scandal, investigators found Maxwell made little distinction between his personal property and assets owned by shareholders. In a report, they concluded that Maxwell couldn't "be relied upon to exercise proper stewardship of a publicly quoted company." Today, says Sir Ronald G. Leach, a retired Price Waterhouse accountant who headed the investigation: "Everything you find in that report, he has done again, on a much larger scale."

Yet investment banks such as Rothschild, Bankers Trust, and Midland Montagu, and commercial lenders such as National Westminster Bank and Lloyds seemed to assume that Maxwell had reformed. More likely, they were enticed by Maxwell's profligate borrowing, which generated handsome fees.

His bankers seem to have had scant knowledge of Maxwell's financial condition. Last March, two months before he accelerated his looting of pension funds, one British banker told BUSINESS WEEK: "There are quite a few other companies I would be more nervous about." And



K-III'S REILLY: IN THE HUNT FOR MACMILLAN

the day after Maxwell's body was found, Robert S. Pirie, one of his key investment bankers, said: "Bob was a very rich man at the time he died."

One reason the British and American banks may have been caught flat-footed is that Maxwell had compiled a respectable record in the years following the Pergamon scandal. In 1984, for example, Maxwell bought and turned around the ailing Mirror Group newspaper chain. But after the 1988 Macmillan and other acquisitions, which were financed with $3.35 billion in debt, Maxwell's methods became more Byzantine. To thwart any outside assessment of his financial stability, he was constantly reshuffling his deck, "selling" assets from the private companies to MCC or vice versa, and switching fiscal years.

Meanwhile, MCC was faltering under the weight of its crushing debt. Maxwell had overpaid for Macmillan. And as the media market cooled, he found it hard to pare debt by selling assets. Then the company's underlying earnings began to slide. The danger for Maxwell was that so many of the bank loans to his private companies were secured by shares in MCC—a kind of double leverage. If MCC stock price declined, so did the value of the loan collateral. At a certain level, the decline would trigger a need for more collateral. So, Maxwell had a big incentive to keep MCC's share price up, because any decline posed a grave threat.

That's exactly what happened this past spring and summer, say bankers and accountants. Maxwell had floated 49% of Mirror Group in May and quickly started using the shares as loan collat-

PENSION FRAUD: CAN IT HAPPEN HERE? YOU BET

Could an American company loot its pension funds, as Robert Maxwell is alleged to have done in Britain?

The government has erected legal barriers, but they don't keep companies from trying. The Labor Dept. has filed dozens of pension-law-enforcement actions this year against companies like Landev Inc., a Connecticut land developer. The department charged in federal court in June that Landev's owners lent 77% of its profit-sharing plan and 37% of its pension plan to real-estate development partnerships in which the owners held stakes. Landev is now in bankruptcy. The owners are contesting the charges.

Pensions are protected by the 1974 Employee Retirement Income Security Act, which bars a long list of transactions with "parties in interest" in a plan, including the employer's officers and directors, the plan's trustees and advisers, and relatives of those parties. "I can't invest my firm's pension in my brother-in-law's real estate deal or buy its business supplies from my wife's shop," says New Orleans attorney Howard Shapiro. ERISA spells out stiff tax, civil, and criminal penalties for officers, trustees, or investment advisers who get caught violating their duty to protect pension assets.

Catching them, however, isn't always easy. The Labor Dept.'s Pension & Welfare Benefits Administration has about 400 investigators, aided by a like number of Internal Revenue Service agents, to monitor 900,000 pension plans and 4.5 million health, dental, disability, and legal benefit plans. The PWBA has beefed up its efforts after a decade of decline: A hundred of its agents were hired just in the last year. But "there just aren't enough people to review all the plans," says Ian D. Lanoff, a former ERISA administrator.

A WEAKNESS. In practice, the Labor Dept. depends on advisers, accountants, and banks to police the pension system. Most of the 60,000 large plans that cover 100 or more employees and retirees hire bank custodians and outside investment advisers, who have a legal duty to investigate and block suspicious deals. Since large plans hold 85% of the $2 trillion in U. S. pension fund assets, most workers have some measure of independent protection. These plans also must submit to an annual audit, but those audits have a weakness. Auditors aren't required to verify assets held by financial institutions. Labor's Inspector General wants that exemption repealed.

For some 840,000 small plans, ERISA requires only an annual report, but that report does not have to be audited. Just as important, the law doesn't require independent trustees or custodians. "The sponsoring company can appoint its own officers as trustees, advisers, and custodians," says Randolph Westerfield, finance professor at the University of Southern California. And that poses a conflict of interest, says Peter I. Elinsky, partner at KPMG Peat Marwick: "If the bank's coming over to shut down Elinsky Pie & Donut, I'm going to look at every source of money I've got."

Robert Maxwell may have fallen to that temptation. And though the U. S. has plenty of laws on the books aimed at preventing similar pension abuses, it still can happen here.

By Mike McNamee in Washington

But Mirror shares dropped nearly within two months of the flotation. wise, hurt by fears of a looming crunch, MCC shed 41% of its value een May and early November.

effect, Maxwell was hit by a triple mmy: His businesses were perform- oorly, he was having trouble selling ssets, and the share price declines causing a liquidity crunch in his te companies. Desperate, Maxwell d to his pension funds, from which ad started borrowing as early as In mid-1991, Maxwell began using amounts of pension-fund shares as teral for private-company loans.

e situation began to spiral out of ol. Coopers & Lybrand, the ac- ting firm handling the investigation e missing money, believes that up 40 million of it was squandered on t buying of MCC and Mirror Group es in a futile attempt to shore up tock and keep bankers from calling ans secured by the shares.

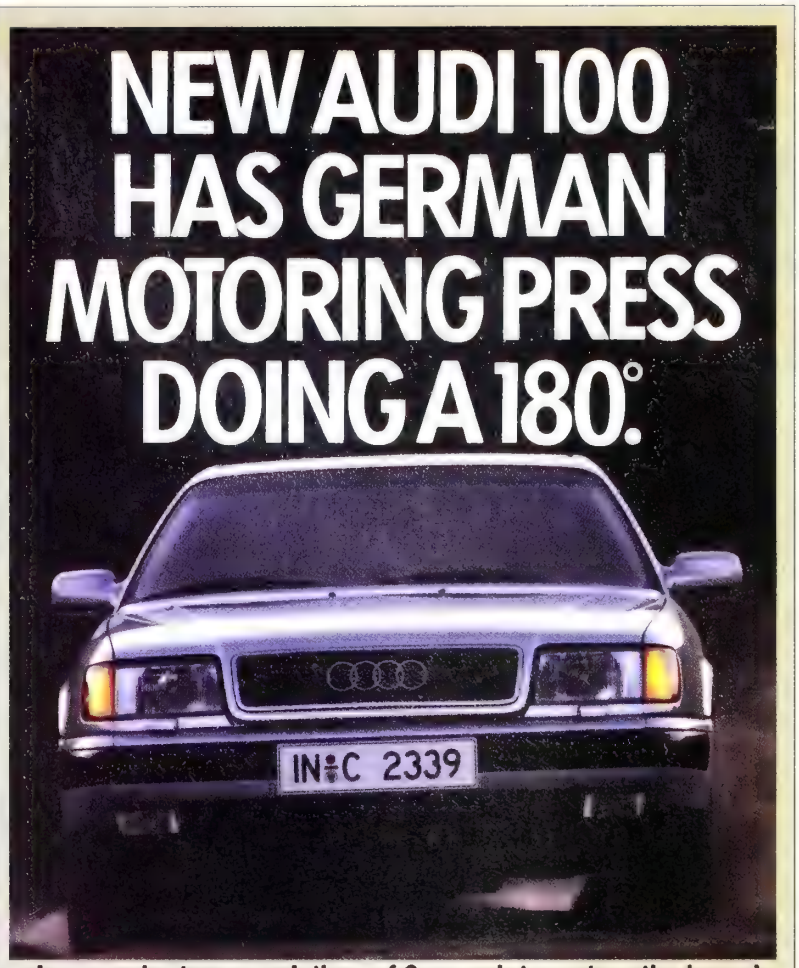
PPEARING MONEY. As the end drew Maxwell's maneuvers suggested a who knew the game was almost up. appeared to have been gambling ly in foreign exchange transac- . And the collateral promised for a million loan from Swiss Bank Corp. sold before it was even delivered to ank. "Every time you turn over a more worms crawl out," says one well banker.

th share prices continuing to ge, the money disappeared into a hole. Some former Maxwell execu- suggest Maxwell stashed some of cash in secret bank accounts. But tigators believe that Maxwell could frittered away much of the missing ey with frantic stock purchases and ts to prop up such hemorrhaging nesses as *The European* newspa- On Dec. 5, his two key private com- es were forced into bankruptcy.

ll unclear is just how much sons n, 32, and Ian, 35, knew. The broth- who worked closely with their fa- will both face questioning by inves- ors from Britain's Serious Fraud e. Both had their passports briefly n away on Dec. 9 by a judge who red them to assist investigators. At ss conference in New York on Dec. evin insisted that his father operated a need-to-know basis."

raveling the Maxwell mess could months and promises to be a legal ybrook. Even his son professes to wed: "It's a combination of events I dn't believe if I read them in a nov- says Kevin. For his creditors and oyees, though, the ramifications of well's wild ride are all too real.

By Mark Maremont in London, with Landler in New York, and bureau rts



In a surprise turnaround, three of Germany's top automotive journals rated the all new Audi 100 ahead of Mercedes and BMW. As Andres Borchman, editor of AUTO BILD, said, "The new Audi 100 is no longer number three among the distinguished German marques, but, as the test proves, number one."

Even though the Audi outperformed the $42,950 Mercedes and the $35,625 BMW, the front-wheel drive Audi 100S is priced at $29,900.* And features a V-6 engine, ABS brakes, driver's side airbag, fully galvanized body, and a 3-year or 50,000-mile limited warranty with no charge for scheduled maintenance.**

—Karl Treutler, Munich

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BY GENE G. MARCIAL

LONGS DRUGS: KEEP YOUR EYE ON THIS LONG SHOT

Like most investment managers, Ed Walczak is dismayed by just how much the stock market has become hostage to the economy. Most stocks, he laments, have plunged simply because investors are worried sick about the prolonged slack in economic activity. But that hasn't discouraged Walczak from scouting for "irresistible values" in the soggy market.

"Great buying opportunities abound among the soft-cyclicals, or nonindustrial companies, that are as sensitive to economic swings as the manufacturing sector," says Walczak, chief investment officer in the U. S. for the Swiss bank Vontobel, whose assets under management total some $16 billion. Walczak's staying away from hard-core cyclicals such as autos because an economic rebound may not be enough to rev up their recovery, he says.

High on this pro's buy list of soft-cyclicals: Longs Drug Stores, a major drugstore chain whose stock has been steadily declining since July, when it was trading at 44 a share. Now down to 34, Longs is selling at a price-earnings ratio of 11.5—not far from its 10-year low of 10.9, notes Walczak.

He thinks the stock is worth at least 48, so he has been adding to his position as it has continued to fall. "Every day that it comes down is one more day of buying opportunity in the stock," argues Walczak, whose faith in Longs is based mainly on its strong fundamentals in the face of recession.

BUYBACK? While earnings for the year ending Jan. 30, 1992, are expected only to match fiscal 1991's $2.94 a share (vs. fiscal 1990's $3.01), Walczak sees net bouncing up in 1993, to $3.40. Revenues have been rising, but competitive pricing stemming from the recession—mainly in California, where 226 of its 266 stores are located—has trimmed margins. New costs from installing scanning systems to keep track of inventories, pricing, and purchasing have cut into earnings. Some 21% of sales are from prescription drugs; the rest is from health care, cosmetics, and photo products and services.

The company, notes Walczak, has a record of solid growth in sales, earnings, and dividends over the past 15 years—plus a return on equity of 14% to 18%. Moreover, Longs' balance sheet is strong, with debt of just 5% of total capitalization. Cash flow has allowed Longs to finance its own expansion.

Walczak also sees a stock buyback, which will trigger a sharp jump in the share price. He's betting that with the stock way down, management will repurchase shares, as it did in past years. Chairman and CEO Robert Long and the Long family control 30%; 17% is held by the company's ESOP.

A STRIKE IN BOWLING?

There was a time back in the 1950s when bowling was the big rage in America. Now most investors tend to consign the sport to nostalgia. But don't tell that to shareholders of American Recreation Centers (ARC), the nation's largest publicly owned operator of bowling centers. They attest to bowling's comeback. The company, which operates 27 centers with 1,100 lanes, mostly in California, has been raking it in and has rewarded shareholders in the past 23 years with a modest but rising cash dividend.

With the stock having fallen to 7¾ a share after climbing to 9¼ in September, some smart-money pros are betting they will hit a strike with ARC. Their optimism is based on more than rising sales and earnings, which have doubled to $57 million and to 52¢ a share, respectively, since 1988.

On Oct. 11, ARC spun off to the public 37% of its wholly owned subsidiary, Right Start, while keeping some 4 million shares. That company is a profitable mail-order outfit that specializes in safety and health products for i fants and children up to age 4. Shar of Right Start now trade at 5½. S American Recreation's stake is wor some $22.5 million, or about $4.50 f each of American Recreation's 5 m lion shares.

One New York money manager i sists that ARC's move in taking Rig Start public makes the bowling comp ny "a very attractive target" for son of the major entertainment companie He notes that bowling centers have b come huge family entertainment cor plexes equipped with electronic game billiard halls, snack bars, and even da care centers. ARC President and CE Bob Crist says his goal is to acqui more bowling centers and catalog cor panies. He declined to say wheth some bigger companies have propose a buyout deal.

THE PROGNOSIS IS GOOD FOR MEDEX

In these times of slumping profit investors are eagerly baggin shares of companies that are buc ing the tide. That's the big reason wh Medex, a maker of a broad range disposable medical products, includin intravenous infusion equipment ar specialized valves for dispensing bloc and fluids for life-support systems, ha been on the fast track.

Its sales and earnings have bee shooting up each year for more than decade. Since 1987, sales have risen a a compounded annual rate of 29%, t $65 million this year, and earnings the same period have gone up at a 21 yearly rate, to $4.9 million, or 97¢ share. So Medex shares have been c the go, from 22 in July to 32 curren ly—despite the market's recent declin

With the stock now trading at price-earnings ratio of 21, has Mede hit its peak? Money manager Chuc Allmon, who is a big Medex bull, say that although the hefty p-e "allows r room for error," the company's "lon term growth record is excellent." An lyst Elliott Schlang of Kemper Secur ties Group is even more bullish: Mede current p-e is about equal to the con pany's projected growth rate—"well i line with our strategy of buying fund mentally solid growth companies."

With the continued growth of it core business, Medex earnings shoul jump next year to about $1.50 a shar on revenues of $110 million, say Schlang. He thinks the stock will ris to at least 42 over the next six months

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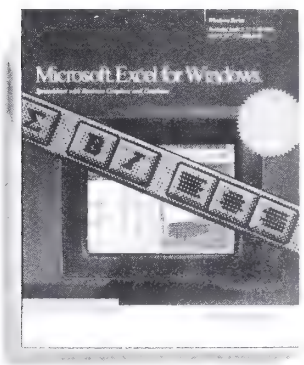
PC World, September 1991.



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DEMOGRAPHICS

PODUNK IS BECKONING

Mass marketers are hunting for growth in small-town America

Most Americans haven't heard of Machias, Me. (pop. 2,569); Belton, Tex. (pop. 12,476); or Baxter, Minn. (pop. 3,695). Most American marketing companies probably haven't either, for that matter: Battling it out in and around major urban and suburban areas is still their paramount strategy.

But these three burgs are now being wooed by some mighty big suitors. McDonald's Corp. has opened a tiny 53-seat café in Machias. Sharp Electronics Corp. helped sponsor Belton's rodeo. And Target Stores, a unit of Dayton Hudson Corp., has opened a Baxter outlet. Of course, Wal-Mart Stores Inc. for years shunned the bright lights of the big city for more rustic locales. But the king of rural retailing is getting a lot of company (table).

MOBBED. These marketers are fleeing the big city for the same reason some residents do: It's getting too crowded there. Most larger markets already have all the fast-food joints and mall outlets they need, and competition is fierce. McDonald's alone has 8,600 U. S. locations.

Small wonder that small towns look attractive. "The competition is nowhere near as intense as in traditional large markets," says Thomas Conroy, an economics consultant based in Allen Park, Mich.

The trick is finding the right spot. Red Lobster, for example, has been expanding into new markets where total area population is 90,000 or fewer. But it rejects four out of five new locales it considers.

And opportunities aren't always obvious. Townsend, Tenn., for example, is small even by small-town standards: Its population is 329. But looks are deceiving. Situated on a well-traveled and picturesque route between Knoxville and the Smoky Mountains, the village "serves both the business and leis[ure] traveler," says David Sullivan, deve[lop]ment manager for Hampton Inns Inc. In August, the 290-motel chain opened [one] in Townsend, and Hampton Inns pl[ans] to open 100 more in tiny towns by 19[92]. Similarly, Target has set up shop in B[ax]ter because it's near Brainerd, Minn., [a] county seat and center for an area [of] 80,000 shoppers. And summertime v[isi]tors to Minnesota's lake district bo[ost] the population to 150,000.

Some companies are also aiming [their] vertising and promotional efforts a[t a] more rural audience. Sharp, for exam[ple], learned that affluent professionals a[nd] white-collar workers in the West[ern] states loved rodeos. So this year, [the] Japanese electronics maker sponsored [10] rodeos and tied them to promotions [at] nearby retailers. Sharp will double [its] rodeo sponsorships next year.

'MORE THINGS.' Lower costs are an as[set] in this sort of micromarketing. But v[ol]ume is usually smaller, too, so busine[sses] must often ratchet down. The Tow[n]send Hampton Inn, for example, has [only] rooms instead of the usual 135. McD[o]ald's has for years built standard-siz[ed] restaurants in smaller towns. But [re]cently it opened 12 smaller formats, [in]cluding three "Cafes." All are design[ed] for towns it would otherwise pass ov[er]. The Machias McDonald's Cafe has ab[out] 60% of the square footage of a regu[lar] McDonald's, and to get needed volume [it] serves a broader menu, including ro[ast] chicken, hot dogs and beans, and even [a] fish platter. "In the smaller towns, y[ou] have to be more things to that commu[nity]," says owner Doug Quagliaroli.

Of course, the community has to wa[nt] the marketer. The presence of the N[a]tional Baseball Hall of Fame & Muse[um] in Cooperstown, N. Y. (pop. 2,180) lur[ed] a Pizza Hut franchisee into applying [for] a permit. No soap: The local council h[as] steadily resisted.

And when a marketer finds a sm[all] town, the market may not be as und[er]served as he would like. In Baxt[er], Target is facing off against a W[al]-Mart right across the street. Al[so] Kmart Corp., which has been [ex]panding into small towns for yea[rs], has an outlet just a mile away. [So] far, business has been plentif[ul]. "People come from 35 miles arou[nd] to shop," says Don O'Brien, Ba[x]ter's mayor. But if the competiti[on] heats up, who knows? These ret[ail]ers, like other urban refugee[s], could find that the small tow[ns] they've recently discovered are[n't] immune to all big-city woes.

By Bruce Hager in New York, w[ith] Julia Flynn Siler in Chicago

BIG GUNS IN SMALL TOWNS

Company	Strategy
HAMPTON INNS	Building scaled-down motels in towns smaller than 75,000
McDONALD'S	Has 3 McDonald's Cafes designed for small towns
RED LOBSTER	Launching 270-seat restaurants in smaller urban areas
SHARP ELECTRONICS	Sponsoring rodeos, branching out to state fairs
TARGET STORES	Has just opened three stores in towns of 3,700 to 15,000

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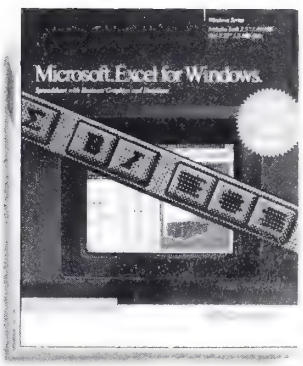

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LAWYERS

ZOE BAIRD'S BRIEFCASE IS BRIMMING WITH IDEAS

Aetna's top counsel is out to change public policy—for starters

Soon after becoming general counsel at Aetna Life & Casualty Co. last year, Zoe Baird was named a lead negotiator in an antitrust suit waged against Aetna and six other insurers. She seemed an odd choice. Soft-spoken, with a polite, gracious manner, Baird had little experience in insurance matters. The case had dragged on for three years, frustrating seasoned insurance lawyers and threatening the underpinnings of the industry. But Baird settled the case in three months. "The stumbling block had been forming a consensus," says James W. Walker Jr., general counsel at CIGNA Corp., one of the other defendants. "She was particularly impressive in helping reconcile differences."

The 39-year-old Baird is considered a legal wunderkind. One of the youngest general counsels of a major U.S. company, she counts among the highest-ranking women in Corporate America. At 27, she was a legal adviser to President Jimmy Carter. At 34, she was picked by Chief Executive John F. Welch Jr. for General Electric Co.'s legal team. Now, as Aetna's top lawyer, she's angling to shape public policy and rewrite the relationships between companies and their attorneys. Says Editor Steven Brill of *American Lawyer* magazine: "She's a trailblazer."

LEGAL LAB. Baird has ambitious plans for reining in legal bills. For one, she urges abolishing hourly rates. "It doesn't make any sense," she says. "Lawyers sell their time, but that's not the product." Along with Robert E. Litan, a fellow at the Brookings Institution, Baird is studying various fee arrangements to determine which will best improve productivity and save money. They plan to unveil their findings at the American Bar Assn.'s annual meeting in August.

For now, Aetna is Baird's testing lab. A key issue is "value billing"—charging not for the time taken but rather for the work actually performed for a client. She also is experimenting with "full purchasing." Common in manufacturing but rare in law, the law firm agrees to discount its fees in return for a set number of cases.

Other companies are taking note. "Some of these ideas have been around for a while," says Price Waterhouse corporate legal consultant Rees W. Morrison, "but they've really picked up pace since she got to Aetna."

Baird is pushing the 100 lawyers in her department to be active team players and to use litigation to advance the insurer's regulatory interests

Baird describes the job of general counsel as "strategic activist." "Her role isn't just as a lawyer," says Aetna President Ronald E. Compton. "She sits in on all major Aetna policy decisions." At the same time, Baird is pushing her 100-lawyer department to use litigation to [illegible] vance Aetna's regulatory interests a[nd] to be active team players. Aetna att[or]ney Katherine McG. Sullivan, for one [of] working with the problem-loan work[out] team. Says Sullivan: "Hopefully, not [one] extra dime comes out of a deal."

'RARITY.' The daughter of a union or[ga]nizer and a jewelry designer, Baird gr[ew] up outside Seattle. From early on, [she] was interested in public policy. As [a] sophomore at the University of Calif[or]nia at Berkeley, Baird took a break [to] run the congressional campaign of De[mo]cratic Representative Brock Ada[ms]. She graduated from Berkeley's Bo[alt] Hall School of Law in 1977. At the Ju[s]tice Dept., she was recruited by Carte[r] counsel, Lloyd N. Cutler.

When Ronald Reagan became Pre[si]dent, Baird moved to the law firm [of] O'Melveny & Myers. There, [she] teamed up with former Tra[ns]portation Secretary William [T.] Coleman Jr. on a Supre[me] Court case testing the fede[ral] government's role in munici[pal] labor disputes. They lost [the] case, but by a 5-4 margin. "[She] is a superb lawyer who und[er]stands how the federal gove[rn]ment works," says Colem[an]. "That's a real rarity."

That talent attracted G[E]'s Welch. At the end of a bre[ak]fast meeting in 1986, rec[alls] Baird, "he asked me to co[me] work for him and do wha[t I] thought needed to be done." [It] great deal, it turned out. [She] handled crisis management [for] the then-scandal-ridden defe[nse] contractor and developed G[E]'s compliance program. Follow[ing] Baird's recommendation, We[lch] hired Benjamin W. Heinem[an] Jr. as GE's general counsel.

At first, Baird wasn't int[er]ested in Aetna's offer. But [ex]ecutives at the company c[on]vinced Baird that she co[uld] help shape public policy affe[ct]ing Aetna. She still is formu[la]ting her ideas, but health car[e] a key concern. One goal is [to] devise a private-sector initiati[ve] that keeps the governm[ent] from controlling health care refo[rm].

It's too soon to tell whether Baird [will] live up to her own expectations. Frie[nds] predict she'll make her mark at Ae[tna] and head back to Washington if a Dem[o]crat is elected President. Says Cut[ler]: "Zoe would be a strong candidate fo[r a] Cabinet position." Wherever she lan[ds], Baird is sure to be noticed.

By Lisa Driscoll in Hartf[ord]

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RETAILERS

MAXMIN IN WINDSOR: "IF I SOLD YOU THIS SHOP FOR ONE POUND, WHAT WOULD YOU DO?"

A PENNSYLVANIA YANKEE IN LAURA ASHLEY'S COURT

How CEO James Maxmin is streamlining the fashion company

If James Maxmin had met Laura Ashley in the 1960s, they probably wouldn't have hit it off. Then a graduate student in England, the Philadelphia-born Maxmin, like many others of his generation, went to the barricades against the Vietnam War and the Establishment. But to Ashley, then in the early days of weaving her worldwide fashion empire, the turbulent and shocking '60s only reinforced a commitment to stately, traditional design.

Flower power, meet floral prints. Since September, the 49-year-old Maxmin, who abandoned a PhD in the philosophy of religion to hawk soap, Volvos, and home appliances, has been shaking Ashley's $498 million dress and home-furnishings company to its foundation.

AXMAN. Maxmin, most recently a top Thorn EMI PLC executive, is a dramatic change from the inbred and infighting managers who ran the retailer after Laura Ashley died in 1985. He oddly blends old-fashioned tough-guy management, information obsession, and New Age aphorisms. Catch phrases such as "cutting people loose" and "employee empowerment" are the stuff of his normal conversation. In one of his first presentations to staffers after taking over as chief executive, he wistfully talked about doing away with headquarters and all titles.

So far, however, he has mostly done away with jobs. Since he took over as chief executive officer—the third top man in little over a year—he has dismissed more than 100 managers, including heads of the British and U. S. divisions and most of the merchandisers in the U. S. In all, he has trimmed 15% of overhead. The payoff has been a 31% jump in the share price of Laura Ashley Holdings PLC, from $1.24 to $1.62.

Keeping up with Maxmin means moving at high speed. He has been racing around the U. S., Europe, and Asia, visiting shops, commissioning customer research, and interviewing employees. Powerfully built from years of swimming and rugby, he goes full throttle even when relaxing. Many weekends, he jets from London to Boston to pick up his longtime companion, Harvard business school professor Shoshanna Zuboff, for a three-hr drive to his Maine farm. There, he n winds by rebuilding stone fences chopping wood.

But it will take a lot more than ene to turn around Ashley, which just a y ago was on the verge of going bust the topsy-turvy retail environment, A ley had become something of a b "The Laura Ashley look is as unimp tant today as automobiles with runn boards," says New York retail con tant Alan G. Millstein. The company vived only through the indulgence of banks and the infusion of $70 mil from its Japanese partner, retailer Ju Co., in return for 15% of the equity.

OUTSIDER. To many, Maxmin was an usual choice to head Laura Ashley, as had no fashion experience. But Laur widower, Sir Bernard Ashley, liked energy and enthusiasm. Recalling first encounter between Maxmin Ashley, fellow board member Hu Blakeway Webb says: "They went e ball to eyeball like two prizefighte Ashley, 60% owner, remembers be "pretty exhausted after half an hou

Maxmin's turnaround strategy ha few components. First, he wants make the company more professional the past, it had no market research woefully inefficient information s tems. Next, he would like to give Ash a better-defined image, promoted wit worldwide ad campaign in 1992. Tak a cue from Body Shop International, cosmetics chain, he wants customers view Ashley as an environmenta friendly retailer. He also intends to cense more home-furnishing items, s as tablewear and linens, because it's inexpensive and profitable way heighten Ashley's visibility.

Finally, he wants to mix its floral p terns with trendy designs aimed at yo ger customers and career women. S he has no interest in appealing to a va ly expanded customer base. "Ninety p cent of shoppers are never going to l us—and that's our strength," he sa Maxmin's own goals: doubling sales five years and achi ing 12% returns.

For employees w are still around n that Maxmin cleared the und brush, it's a refre ing, if brutal, chan "His visibility a hands-on approa have made a big diff ence to morale," s Jo O'Connor, direc of garment desig "Enthusiasm was la

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[illegible]

wildering catalog of suggestions and [illegible]

"If I sold you this shop for one pound. [illegible]

Manager Kate Fowler, flush with ex- [illegible] with slow-selling items—but unable to [illegible] dresses. Maxmin tells her that, for the [illegible] that track inventory and will let her order items from other shops. He adds that only now are consumers being surveyed about what Ashley means to them [illegible] liant!" Fowler exclaims.

OUTSIDER. Although his American accent immediately pegs him as an outsider in [illegible] way around. After a boyhood in subur- [illegible] nell College in Iowa before opting for graduate school overseas. But riots closed the Belgian university he planned to attend, so he headed first to Cambridge, then the University of London. Following a short stint with Unilever [illegible] East End, he decided to ditch academia [illegible]

As marketing manager for Volvo in [illegible] tioning the car around the themes of [illegible]

Lovering, finance director at British re- [illegible] min at Volvo, Maxmin went on to head [illegible]

[illegible] at Ashley [illegible] tempt to play down the company's tradi- [illegible]

himself. But that's all right with him. "We're in a market where urgency is the key to survival, and everybody should be [illegible] ing New Age about that.

NO ONE'S SNIFFING AT AROMA RESEARCH NOW

Dramatic new discoveries are benefiting science and business

Seattle's Spot Bagel Bakery Inc. stores its rolls in Plexiglas bins to [illegible] entice customers, store designer J'Amy Owens plans to use a pellet, made by International Flavors & Fragrances Inc. (IFF), that emits the smell of fresh bagels when heated by Spot's neon sign at supermarket displays. "For years, I've been specifying the lighting, music, and ambiance in stores," says Owens. "Why not add the dimension of aroma?"

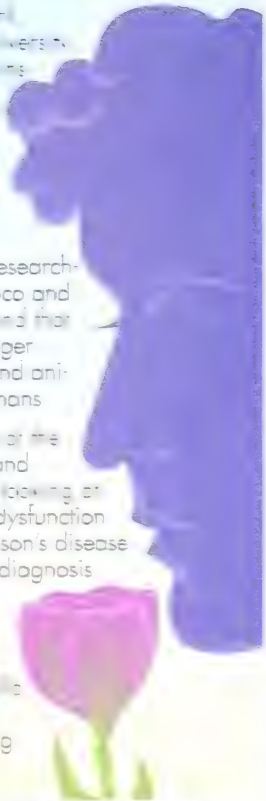
Retailers and other companies are starting to ask the same question as science learns more about how smell works. Top fragrance makers are pouring millions into research aimed at grabbing a bigger share of both the $4 billion perfume business and the huge market for scents that go into household prod- [illegible] of aromas: some help people relax, [illegible] ers help keep workers alert. And [illegible]

STRONG FEELINGS. [illegible] and sound got most of the lab limelig[illegible] There wasn't even a standardized test [illegible] care because no one died of [illegible] boosted its funding for many types [illegible] research, smell included. That adds [illegible] der, led to "breakthroughs that are [illegible]

The most dramatic [illegible] these came last April wit[illegible] discovery by scientists Li[illegible] Buck and Richard Axel [illegible] tute. Odors reach the [illegible] spots the size of collar b[illegible] tons located high in [illegible] nose. There, odor molecul[illegible] swept in on the breath, b[illegible] to microscopic receptors [illegible] These cells reach into a [illegible] of the brain associated [illegible] is why some experts [illegible] smells can elicit vivid mem[illegible] ries and strong feelings.

For years, no one [illegible] how the receptors wor[illegible] But Buck and Axel [illegible] ered a family of genes [illegible] hold the blueprint for [illegible] dreds of receptors—perh[illegible] 10,000-odd odors h[illegible] can smell. This discove[illegible] means "the art of perf[illegible] ery will never be the sa[illegible] says Avery N. Gilbert, he[illegible]

WHAT'S NEW IN SMELL RESEARCH



HOW THE NOSE SMELLS In April, researchers at Columbia University identified hundreds of proteins in the cells of nerves in the nose that most likely pick up the scents humans smell. This finding could help the $4 billion perfume industry design new scents.

SEX AND SMELL In October, researchers at the University of Mexico and at the University of Utah found that pheromones, odors that trigger sexual behavior in insects and animals, also likely exist in humans.

DISEASE AND SMELL Scientists at the University of Pennsylvania and University of California are looking at connections between smell dysfunction and Alzheimer's and Parkinson's disease. Smell loss could be used in diagnosis.

SMELL AND BEHAVIOR Psychologists have found that peppermint makes students more alert, while vanilla relaxes patients undergoing magnetic resonance imaging.

[illegible]

an-Roure, the world's No. 2 fra-
e maker, based near Geneva. He
that in place of current jargon that
ibes smells in terms of "notes" and
rds," perfumers will "speak of
-receptor agonists and molecular
g affinities of floral-receptor pro-
" He says it will one day be possi-
draw an olfactory profile of cus-
s and design scents just for them.
block odors they find disgusting.
easuring the response of olfactory
s to various compounds, scientists
yder's lab are searching for "antag-
." These are odorless molecules
would block the recep-
for foul smells. "More
tant than new per-
s," says Johns Hopkins'
r, "is to develop antago-
which you could spray
ver the men's room in
Station—and do a great
e to humanity."

WARNING. More in-
ng may be links be-
smell and illness. Rich-
. Doty, director of the
ersity of Pennsylvania
& Taste Center, has
that patients with Alz-
r's and Parkinson's dis-
suffer identical smell
Because this often pre-
other symptoms, it
be an early test for
ailments. And because
ffects of Alzheimer's are
pronounced in the high-
gions of the brain associ-
with smell, some scien-
think the disease could
be caused by foreign en-
attacking the brain
gh the nose. Michael
a neuroscientist at the
ersity of California at Ir-
is studying detoxifying
s in nasal receptors that
n airborne intruders. He
Alzheimer's victims may
fewer of these agents.
e science of smell could
other insights into the
. "The olfactory system
dies all the major processes, such
e birth and differentiation of neu-
that occur when the brain first
ops," says James E. Schwob, a neu-
logist at the State University of
York Health Science Center at Syr-
. Olfactory nerves die, and new
grow every 30 to 90 days, without
ting the sense of smell. Nature
have arranged this, says Schwob,
se olfactory nerve cells, which
h from the nose directly to the
, are relatively exposed and thus
rable to damage. Understanding
nerve regeneration holds great promise, says Schwob: "We hope that it will tell us about brain development—and where it can go wrong."

While such research continues, the most exciting news for fragrance makers may involve pheromones, odors that trigger sexual behavior in insects and animals. Finding those in humans "is our holy grail," says Eugene P. Grisanti, chairman of New York-based IFF, the world's No. 1 fragrance maker. The pheromone-detecting organ in animals, a sac behind the nose called the vomeronasal organ (VNO), was thought to be absent or vestigial in humans. But in October, scientists at a pheromone conference in Paris presented what experts say is persuasive evidence that VNOs exist and function in humans. Researchers from the University of Mexico's medical school found VNOs in more than 900 of 1,000 subjects studied.

DOTY IN THE LAB: DOES OLFACTION PLAY A ROLE IN ILLNESS?

More important, scientists at the University of Utah have found that cells in VNOs of subjects reacted to "pheromones" cooked up by a Menlo Park (Calif.) company named Erox Corp. "There are some substances that elicit electrical activity from the VNO," says Charles J. Wysocki, a scientist at Monell Chemical Senses Center in Philadelphia, "but we don't know what it means yet."

Of more immediate value to fragrance makers are discoveries linking scents with behavior. "Down the line, people will buy fragrances not for smell but for effect," says Annette Green, who heads the Fragrance Research Fund, an industry group. Psychologists have found that college students perform better on a "sustained attention" task when peppermint or lily of the valley is intermittently pumped into the room. Other experiments have shown that the smell of vanilla helps relax patients undergoing magnetic resonance imaging.

Other studies show that pleasant odors can enhance self-esteem and promote workplace harmony. Based on similar earlier studies by Japan's top cosmetics company, Shiseido Co., construction giant Kajima Corp. has sold 33 systems at $8,000 each that spritz scents throughout office buildings to calm or rev up workers. Some 250 smaller, competing versions of that system have been installed at $1,400 apiece.

LIPSTICK THERAPY. In the U.S., most experiments haven't gone this far. But insiders say General Motors Corp. may look into the use of aromas to keep drivers attentive. And U.S. beauty and cosmetics giants are launching products that claim to relax and revive. Aveda Corp.'s new Esthetique aroma-therapy line includes lipstick that freshens the breath. Avon Products Inc. and Estée Lauder Inc. are experimenting with similar approaches.

Some boutiques, such as Victoria's Secret, have started scenting their stores with distinctive aromas. And J'Amy Owens, whose Seattle-based firm is called Retail Planning Associates, has started using fragrances for clients such as Kroger Co. and Bigsby & Kruthers. For three B&K Knot Shop tie stores, she chose a leathery, oaky aroma designed by IFF to go with a tree that's part of the store decor. B&K President H. Gene Silverberg is so pleased with the effect that he is trying it out in his 19 other stores. "The employees find it very pleasant," he says. "A happier staff means a happier customer, and that means more sales." And more incentive for fragrance makers to stay hot on the scent of research into smell.

By Pamela J. Black in New York, with bureau reports

Developments to Watch

EDITED BY FLEUR TEMPLETON

A CAMERA THAT READS WRITING —AFTER IT HAS BEEN ERASED

The U.S. Postal Inspection Service boasts that it convicts a higher proportion of arrested suspects than any other federal crimefighting agency, including the FBI. One reason is the agency's high-tech crime lab in Washington.

Among the lab's newest weapons is an infrared video imaging system that can often reconstruct otherwise undetectable evidence. Recently, for example, a thief signed a credit card he had snatched from a mailbox. After using the card for a few days, he sponged off the signature, then threw the card away. But it was retrieved and the system detected the signature from invisible ink residues. A handwriting expert's testimony then helped convict the crook. Unlike conventional IR film, the video system allows details to be computer-enhanced before the image is printed on a high-resolution printer from Lasertechnics Inc. in Albuquerque.

TWO VICTORIES IN THE WAR ON ALZHEIMER'S

In the fight against Alzheimer's disease, scientists have been frustrated on two fronts. They know that victims' brains contain tangled clumps of a protein called beta amyloid. But they don't know whether these cause or merely are a symptom of the deadly disease. Researchers also haven't been able to reproduce the disease exactly in animals, which would enable them to test new therapies.

Now, there's progress on both fronts. In a study reported in the Dec. 12 issue of *Nature*, scientists at Mount Sinai Medical Center inserted the gene for the beta amyloid protein and a special genetic switch into mouse embryos. That caused the brains of the mice to make 80 times more protein than normal. Neurobiologist Gerald Higgins of the National Institute on Aging in Bethesda, Md., then examined the mice as they aged. He found that they developed all the major symptoms of Alzheimer's, including the massive nerve-cell death that is so devastating to people.

Higgins suggests that this collaborative experiment offers compelling evidence that the protein is indeed the cause of the disease. In addition, he is already planning to use the mice to test substances that could protect nerve cells from the lethal effects of the protein.

WEAPONS TESTS: HOW THE U.N. KEEPS ITS EAR TO THE GROUND

With the breakup of the Soviet Union, the threat of worldwide nuclear war may have diminished. But that doesn't mean other countries will refrain from developing their own nuclear prowess. To keep tabs on them and to uphold disarmament treaties, a U.N. committee called the Group of Scientific Experts is developing a global computer network to detect secret underground weapons tes

The network will link 60 existing seismic monitoring statio in 34 countries, including the U.S., China, Germany, Jap and the former Soviet Union. The equipment monitors grou motion, filtering out tremors caused by events such as co mine blasts. When unusual motion is detected, the data will transmitted immediately, via satellite, throughout the netwo Earthquake researchers and geologists will also have access the data.

The big technical obstacle, says committee adviser a Southern Methodist University geophysicist Eugene Herrin, how to link different computers and communications ge globally. But part of the system has already passed a key te In a 42-day trial last spring, stations in the South Paci detected underground nuclear tests conducted by France.

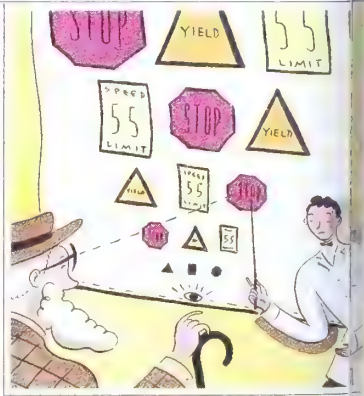
THESE BREATH TESTS SHOW MORE THAN WHAT YOU'VE BEEN DRINKING

Scientists may soon be able to reveal more about you fr your breath than you think. That's because some diseas cause specific chemicals to be discharged in the breath. F example, the breath of a person with liver disease conta dimethyl sulfide. But so far, breath analyzers have been able to detect very small amounts of specific chemicals or take continuous readings.

Now, researchers at Battelle Memorial Institute in Colu bus, Ohio, have come up with a highly sensitive analyzer th tests each breath so researchers can watch fluctuations of chosen chemical in a person. The analyzer was adapted fr an instrument that measures trace gases in the atmospher

Besides disease diagnosis, Battelle chemist Don Kenny sa the device could be used to study worker exposure to che cals—say, in the dry-cleaning industry. Next, the Battelle te wants to collaborate with medical researchers in human st ies to determine the actual levels of chemicals in the brea that indicate specific diseases.

'SEEING' THE HIGHWAY THROUGH AN OLDER DRIVER'S EYES



An aging population inevitably means that the average age of drivers will rise. That could pose safety problems because road signs and highway lighting are often designed by relatively young engineers. They rarely consider the deterioration in eyesight that occurs as people grow older.

That will soon change, thanks to research at Ontario's University of Waterloo. Werner K. Adrian, a prof sor of optometry, has developed a computer model that ables highway engineers to see through older eyes. The so ware shows how the same scene—an intersection, example—would appear to drivers of different ages und various lighting conditions. Road signs are also a proble Adrian found that older drivers can't always read toda signs in time to respond. Adrian's research will be reflect first in new lighting standards for U.S. and Canadian inters tions and tunnels, which should take effect in mid-1992.

. ROSS WHO? EDS IS DOING UST FINE ON ITS OWN

e company Perot founded is thriving by showing clients how to harness technology

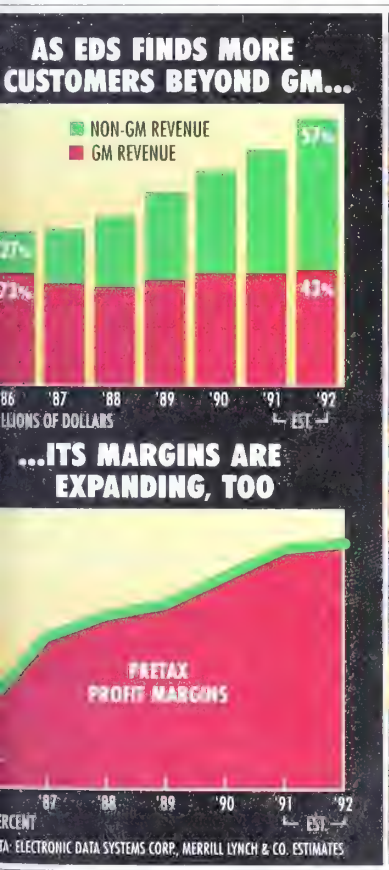
hasn't been much of a year for ompanies in the computer busi- ess—especially for the guys who k out the machines that run big cor- tions. IBM's profits, according to Street projections, will be $4 a e, down from $10.50 last year. Digi- Equipment finished its fiscal year June with a net loss of $617 million. Unisys? It has taken charges of than $1 billion in a frenzy of down- g and is expected to finish 1991 h in red ink. Even relative young- such as Apple Computer Inc. and paq Computer Corp. have had losses year as prices plunged and reces- pressed customers stopped buying.

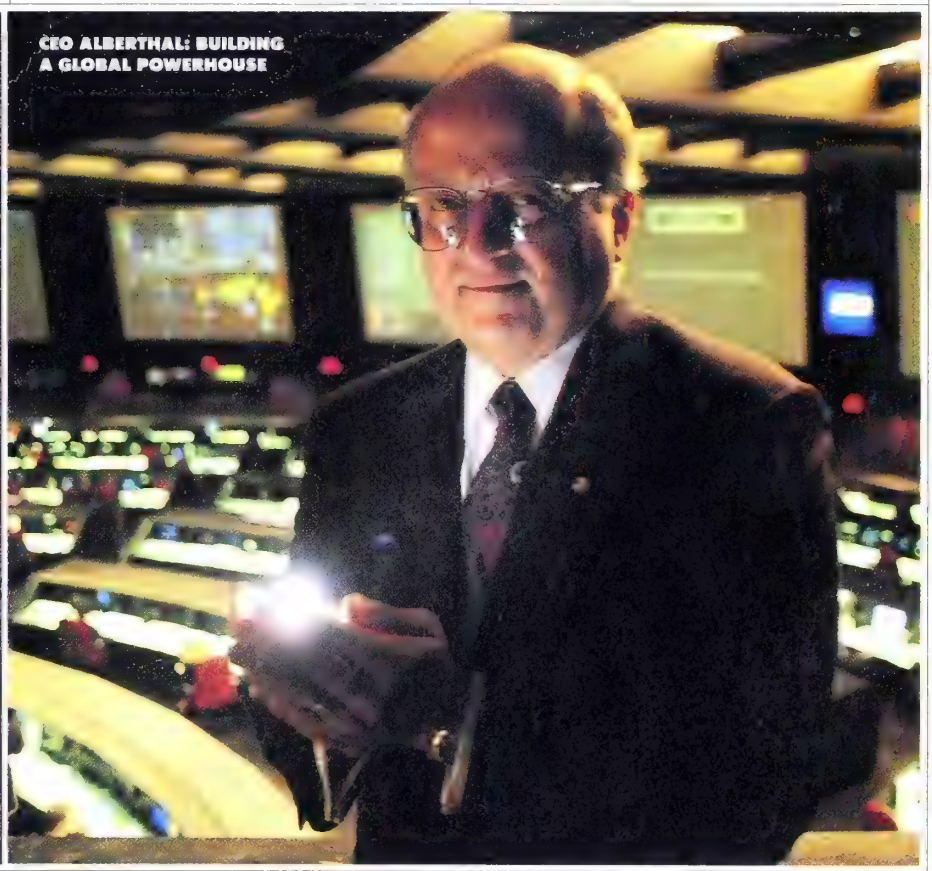
who's cleaning up—right in the le of the downturn and by catering e kind of blue-chip customers that made IBM and Digital Equipment seem so recession-proof? Electronic Data Systems Corp., the computer services colossus. Instead of building computers—a perilous business in this era of slow growth and plunging margins—EDS, a unit of General Motors Corp., helps customers use them. For some, it serves as a systems integrator, designing and installing elaborate networks that incorporate hardware and software from many sources. For others, it takes over and runs entire data processing departments in return for an annual fee—a business called outsourcing, in which EDS is the clear leader.

OUTSIDE MONEY. Both businesses are coming to look better than building and selling hardware. Systems integration, a $5 billion-a-year market, will grow to nearly $13 billion by 1995, according to researcher Ledgeway/Dataquest. Similarly, outsourcing, at $10 billion, will likely grow to $24 billion. EDS, riding the boom, is expected to show 1991 revenues of $7 billion, up 11% from 1990. Profits are likely to jump 13%, to about $564 million, on top of a 14% rise last year.

Indeed, Dallas-based EDS is now perhaps the most important rival that IBM, DEC, and other large computer manufacturers face—even though it's one of their best customers, too. It's poised to grab the lion's share of the vast computer services market, which IBM, DEC, and the others are scrambling to get into. Consultant Andrew S. Rappaport extols EDS as a model of the "computerless computer company" that he described in a controversial article in the *Harvard Business Review* last summer: It's profiting from helping customers harness the computer's awesome power, largely through writing software and managing complexity for them.

Five years after the departure of its

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BusinessWeek

smatic founder, H. Ross Perot, EDS
oving in spades that there was more
success than one dynamic entre-
eur—and, equally important, that
's more to EDS than a fat parent.
company has built a backlog of
y $20 billion in non-GM business.
for the first time since GM acquired
1984, EDS will get less than half of
venues from the auto maker (chart,
85). EDS handles most of GM's com-
operations under long-term, fixed-
contracts. "They are the toughest
etitor we run up against," concedes
trick Horner, a former EDS execu-
who now heads Perot Systems
, the $150 million competitor the
er chairman founded three years
"We like to go where they're not."
the vanguard of this movement—
IBM, DEC, Andersen Consulting, and
others in hot pursuit—EDS is
d to grab the lion's share. Lester
lberthal Jr., 47, EDS's mild-man-
CEO, plans to more than triple the
any's size by the end of the decade
urn it into a global powerhouse. To
Alberthal, a 23-year company vet-

DS has to offer ways to prove 'overall cost, quality, time to market'—not just heaper data processing

is shaking up everything from the
ization chart to the corporate im-
He's pursuing joint marketing pacts
acquisitions, such as the recent
million takeover of McDonnell
las Systems Integration Co., a gi-
computer-aided design and manu-
ring. That's one of a series of ac-
ions that should generate at least
million, or 10% of annual revenues,
year.

TURED. The big challenge for EDS,
gh, is to get closer to customers and
business problems. That will re-
quicker responses than monolithic
eting organizations can come up
says Rappaport, president of Tech-
y Research Group in Boston, a con-
ng company. "For a company like
o be successful, they need to contin-
fracture themselves," he says.
berthal is already starting to frac-
EDS. He has reorganized it into 38
tegic business units," each focused
market such as health care or
portation. To increase agility, he's
ing authority into the ranks of
65,000 employees. Now, each unit
ops its own marketing strategy and

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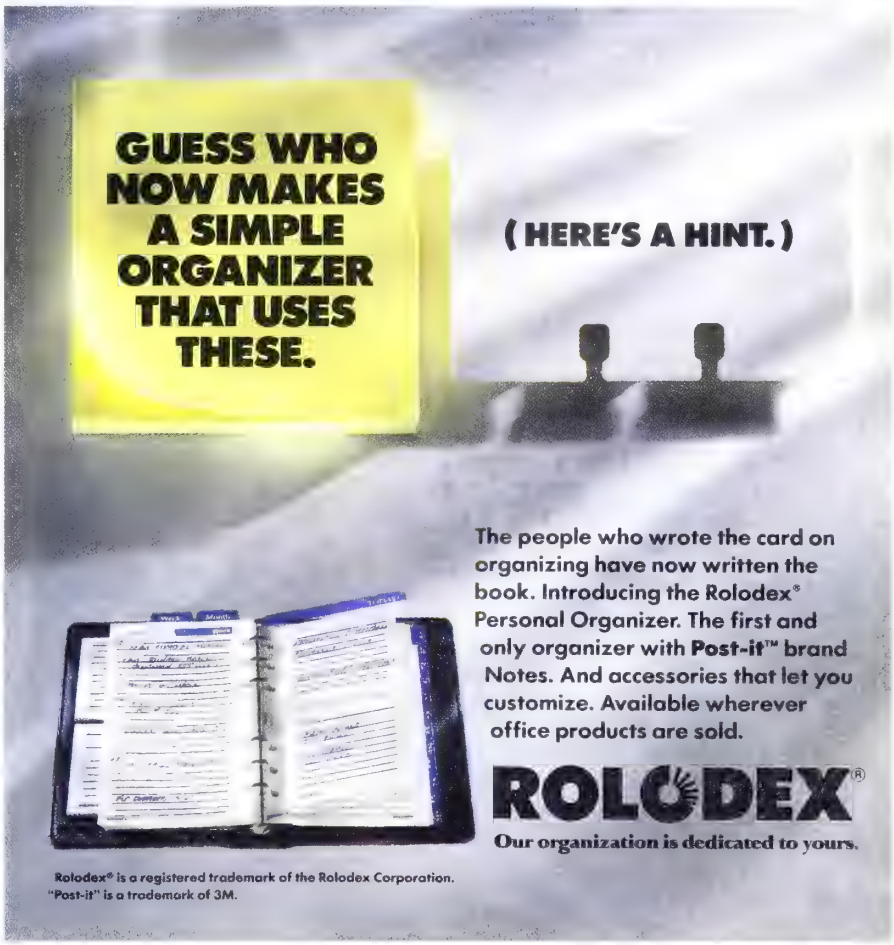
ONE COMPANY'S ASSETS GREW
41% IN A RECESSION YEAR.



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ld accountable for sales and profits. vas a bold move and one that I was rised they were able to take all in step," says Douglas W. Sewell, a aging partner for integration ser- and technology at rival Andersen ulting.

the old days, it was enough for EDS ve customers cheaper and more reli- computer power. But now it must ince them that it can actually reen- er their businesses. "We can help take technology and leverage it to ove your overall cost, quality, [and] to market," says Alberthal, who me CEO in 1986.

nsider EDS's contract to modernize ago's public parking enforcement. devised a system that includes hand- computers that print out tickets for by parking enforcement officers. e's also a computerized inventory of ity's 25,000 parking meters. An elec- c imaging system that can throw a ized picture of a ticket onto a com- screen helped get ticket disputes of court and into neighborhood- d hearings. The result is more rapid collection: Before the system went nly 10% of tickets were paid in the they were issued. That has jumped %, says city Parking Administrator Fryklund. She expects revenues parking violators to rise 62% this to more than $60 million.

E PROBLEM. EDS is out to deliver ar payoffs to clients ranging from affiliate National Car Rental to . As struggling GM keeps its spend- with EDS level, the company needs de contracts more than ever to its growth targets. It aims to boost GM revenues by at least 20% a year ne projected 15% growth rate for all mation technology services, such as ulting and managing data centers.

far, EDS is ahead of target, with GM revenue up 26% in the first nine hs of 1991. It also has signed some illion worth of non-GM contracts in period, almost 30% more than in all 990. And more non-GM business as fatter profits, says Stephen T. ellan, an analyst with Merrill Lynch tal Markets. He figures that pretax ts on GM contracts—with no mar- g costs and no risks for EDS—are t 10% to 12%, or a few points lower in EDS's other business (chart, page GM insists it has a series of safe- ds to be sure it's paying competi- rates.

keep the momentum building, EDS rking on its image—both internally externally. "For the first 22 years of existence, EDS the company really t have an image," says Alberthal. of the image-building was around

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Ross [Perot] wanted for Ross." Af-
1 acquired EDS in 1984 for $2.6 bil-
he company was again overshad-
by public clashes between the
EDS team and defensive GM man-
Perot, then a GM director, openly
zed how GM ran its car business.
EDS image had become so con-
that executives at Westmoreland
Co. thought EDS worked only for
t GM. They learned otherwise from
ry colleagues, but a call to an EDS
in the Philadelphia phone book
eached a health spa. The two com-
finally made contact last year,
Vestmoreland signed a 10-year out-
ng contract with EDS.

AN FACE. To boost EDS's visibility,
thal has approved the company's
major ad campaign, spending an
ated $9 million in just the first half
1, to reach government and indus-
aders. To rally the troops, the nor-
reticent Alberthal agreed to ap-
n an in-house video, cavorting in
sunglasses to such lyrics as: "The
's so bright, we've got to wear
s."

ne company is loosening me of its Perot-era rules: o longer warns new hires against 'living in sin'

all part of a drive to humanize
Alberthal says he agreed to ham it
ter learning that the average age
employees is now about 34. Many
as part of EDS outsourcing deals,
ich it often hires a customer's data
ssing personnel. Such newcomers
steeped in the Perot traditions of
military teamwork. EDS hopes to
rce those values—while loosening
old strictures. Employees say, for
ce, that it no longer warns new
against "living in sin."
erthal is also trying to boost EDS's
e overseas. While only 18% of reve-
last year came from abroad—and
f that was from GM—EDS aims to
foreign sales to 50% within a de-
The best prospects are in Europe
heads toward a unified economy
1992. Malcolm J. Gudis, a senior
resident in charge of EDS's interna-
business, is betting that many Eu-
n companies will outsource to cut
and boost efficiency. EDS's global
nation network and centralized con-
vill give it an edge, Gudis figures.
the GM connection doesn't hurt ei-
Last year, for instance, EDS signed

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Closing Arguments
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CNN

THE WORLD'S NEWS LEADER

All times Eastern

year, $300 million outsourcing con-
with Saab Automobile in Sweden,
n is 50% owned by GM.
alysts agree that EDS has a clear
start with its telecommunications
ork, which already links 19 major
processing centers worldwide. But
's also the danger that EDS has
more network capacity than it can
tably fill. And rivals are quickly
ing up. Cap Gemini Sogeti, Eu-
s leading technology-services com-
sold 34% of its equity to Daimler
this summer. In return, it gets to
d Daimler's huge private network
ermany into other markets.

TEXAS BOOTS.' EDS's emphasis on
urcing may prove a weakness, too.
ry Dumont, head of European soft-
services for International Data
, says EDS must expand other ser-
such as systems integration. "They
little systems-integration image in
European countries," he says.
boost its services capabilities, EDS
tly swallowed one of Europe's larg-
omputer-services companies, SD-Sci-
for $272 million, giving it a broad
of British and French customers.
challenge now will be to centralize
ol over Scicon, a $400 million com-
without losing local talent or cli-
That may require more delicacy
EDS has been known for.
ile the company now usually hires
pean managers, its early Texas
plants sometimes left a poor im-
ion. One British executive recalls
dustry luncheon four years ago at
a top EDS executive was a speak-
His late arrival by helicopter
ned out the previous speaker. Then
DS man left abruptly, not bothering
at with other guests. "They wear
Texas boots and don't care where
plant them," says the British exec.
is having better luck at projecting
d image back home—especially at
t GM. Before EDS, "our data pro-
g costs were going up about 16% a
In the last four years, they've been
o down," says Robert J. Schultz,
ce-chairman. Among other projects,
s working on a computerized prod-
evelopment system for GM, de-
d to get cars and trucks to market
er and cheaper.
at's just the kind of synergy GM
d to create when acquiring EDS, but
so an example of the reengineering
promises other customers. The re-
won't be known for several years.
f it can pull off a big victory in its
backyard, EDS may finally be better
n than what's-his-name.

By Wendy Zellner in Dallas, with Ethan Levine in Paris and David Woodruff in Detroit

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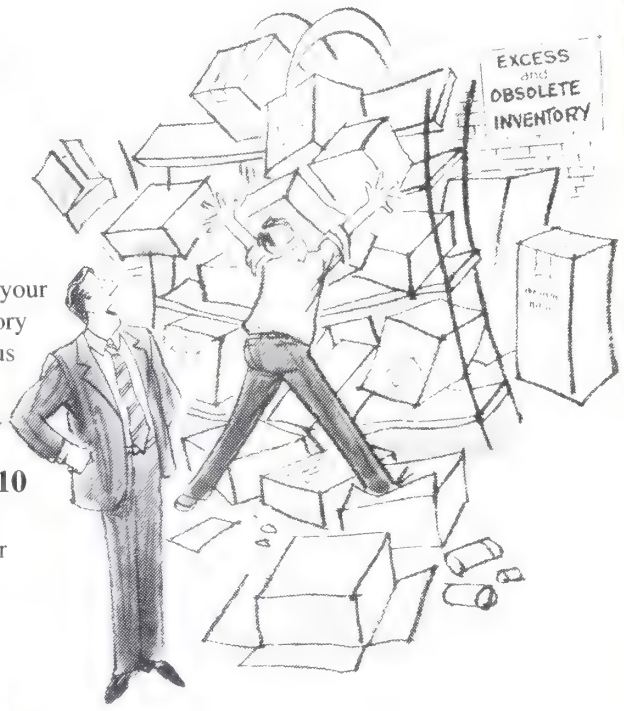

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STARTUPS

BUT CAN IT LEAP TALL BUILDINGS?

In its hat, General Magic has a phone-pager-faxer-secretary-in-one

No one wants to talk about General Magic Inc. Not the founders. Not the investors. Not even the company spokeswoman hired last August, presumably, to talk. In fact, so hush-hush are the goings-on at this 18-month-old startup that Apple Computer Inc. Chairman John Sculley, whose company holds a 20% stake, sidesteps questions with this whispered response: "What's General Magic?"

What, indeed. Despite the company's best attempts to keep its plans under wraps, word is leaking. And so far, the early word is good. For one thing, there's the intriguing array of investors who have anted up at least $22 million to fund General Magic. The list reads like a who's who in technology: Besides Apple and some big-name ex-Apple executives, there's Japan's Sony and chipmaker Motorola. Now, investors say, American Telephone & Telegraph Co. is set to buy a stake. The phone giant, of course, is mum.

What's attracting the heavy hitters is the potential in General Magic's upcoming technology. Under development, investors say, is a prototype handheld machine that is both a communications device and a personal organizer. So easy to use is the software, insiders say, that its screen symbols could someday become as well-known as the layout of a touch-tone phone. "This is no little joke company," says Guy Kawasaki, an ex-Apple software executive. "This one is a big deal."

STELLAR CAST. Such enthusiasm could be misplaced for a startup with no product, no track record, and designs on a market that hasn't yet materialized. But if it can live up to the hype, General Magic will do so by taking a different tack from other Silicon Valley startups. It's not a hardware maker or simply a software supplier. Instead, by mid-1993, it will create software and develop hardware specifications, then license the technology to its investors and possibly others. They will produce the products. Apple, for instance, is expected to use the General Magic software in

a machine, similar to the prototype now under development, that acts as a personal organizer, electronic-message taker, and, using pen-sensitive screens—like those in handwriting-recognition computers—a note-taker. Sony Corp. may use the software to simplify hard-to-use products such as videocassette recorders. At the heart of all these products will be chips made by Motorola Inc. and, perhaps, communications gear from AT&T.

General Magic's roots go back to Apple's development labs. There, Marc Porat, head of business development for Apple's Advanced Technology Group, and Bill Atkinson, a top Apple scientist, hatched the concept of a unique, palm-size device for the traveling executive. They envisioned an under-$1,000 machine that could send and receive phone messages, electronic mail, and cellular transmitted faxes. They figured the machine could be a big hit. But in 19 Apple wasn't so sure. "The idea w endearing but did not make a lot sense," says Jean-Louis Gassée, th head of Apple engineering.

So with Apple's blessings and $10 m lion from its coffers, Atkinson and Po took off. They recruited Apple vetera including Andy Hertzfeld, a key develo er of the Macintosh's software. The days, General Magic has approximate 40 employees.

EDGY RIVALS. In a crunch year for co puter makers, General Magic is livi the old Silicon Valley dream. Its play Mountain View (Calif.) offices were l out by Tom Carlisle, who design Steven P. Jobs's NeXT he quarters. Furniture is splash with the reds, blues, a yellows of a toddle blocks. Conference roo have such names Abra, short for abra dabra. Employe can buy Gene Magic T-shirts, t bags, and beach tow at the compa store—all of it emb zoned with the Gene Magic logo, a magician's top with a rabbit popping out. Ther even a company mascot: Caged under desk is Bowser, a white rabbit.

But it will take more than exuberan for General Magic to succeed. Since kinson's original vision of the ha held device, there have been so glitches in development. And n well-heeled rivals are zeroing in on t same nascent market. Experts say si lar devices are in the labs at Hewle Packard, Japan's Sharp, and at McC Cellular Communications, which is laborating with software maker Orac

At stake is the computer industr next billion-dollar market. Sales of ha held personal organizers, such as Sharp Wizard, and of palmtop comp ers, such as HP's 95LX, are boomi Researcher Link Resources figures market reached $353 million in 19 sales and will mushroom to $1.2 bill by 1996. "Someone is going to be s cessful on the scale of a Nintendo," s Roger McNamee, general partner in tegral Capital Partners, a Silicon Val investment firm.

General Magic and its star-studd backers figure that it might as well them. After all, they have the peo connections, and, maybe, a head st Now, all they have to do is pull rabbit out of their hat.

By Kathy Rebello in Mountain View, C

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Health

CHOLESTEROL MANAGEMENT FOR ALL SEASONS

For San Francisco advertising executive Fred Goldberg, high cholesterol is an occupational hazard. Between business meals and clients that include Round Table Pizza and Dreyer's Grand Ice Cream, his cholesterol level hit a towering 380 five years ago, and it still routinely hovers around 250. To compensate, the 50-year-old adman takes two different cholesterol-lowering drugs a day, runs three times a week, and often skips meals. "I'm living proof," he sighs, "that a pill is not enough for someone who started out where I did."

Alas. Recent publicity on the effectiveness of Merck's cholesterol-lowering agent Mevacor in reversing atherosclerosis, a leading cause of heart disease, was great news for the company. But for most Americans, the cholesterol story hasn't changed much.

Drugs such as Mevacor, niacin, and Pravachol, a new agent from Bristol-Myers Squibb, have been proven to work. But they carry high price tags, and some can have unpleasant side effects. And unless the drugs are paired with dietary changes, their effect on cholesterol, says Judith Levine, consulting nutritionist to the American Heart Assn. (AHA), "is like bailing water out of a boat with a hole in it."

Studies have shown that for every percentage point drop in your cholesterol, your chance of heart disease drops two points. While doctors are still debating some fine points of cholesterol management, the essential advice is to lower your fat and cholesterol intake. With a little common sense and some basic information, you can get through the cholesterol-saturated holidays and on to a healthier heart.

Your battle against cholesterol starts with a numbers game. Learn your total cholesterol count, your good-to-bad cholesterol ratio, and then a new way of evaluating the healthiness of your diet.

First, have your doctor check your cholesterol level. In families with a history of heart disease (such as one in which a close relative under 55 has suffered a heart attack), many doctors say even young children should be checked. Otherwise, establish a baseline cholesterol level at about age 25 with subsequent checks during annual physical exams.

GAME PLAN. Most doctors recommend not exceeding a total cholesterol level of 200. But your total cholesterol level includes two major parts, so-called high-density and low-density lipoproteins, or HDL and LDL. LDL is often called bad cholesterol because it leads to arterial buildups. HDL appears to carry cholesterol away from arteries to the liver where it can be eliminated. Evidence is growing that raising HDL levels can protect you from heart attacks. The AHA recommends that your LDL level not exceed 130, with a corresponding HDL level that's not falling in the 60 range. Doctors say a ratio of HDL to LDL is generally acceptable.

It's important to base your game plan for controlling cholesterol on various risk factors. If your total cholesterol level is over 240 and you are overweight, a smoker, or have a family history of heart disease, your doctor may put you on medication immediately. But most

e, even those with hy cholesterol levels, are advised to maintain a at and cholesterol diet. ere is a fairly short list ods so high in cholesterol nost doctors recommend g them out entirely: egg organ meats—such as or brains—and most ish. Also, dairy products neats tend to be high in sterol, and cooking foods utter should be avoided. ts recommend consumo more than 300 millis a day—about the alent of one egg scramn one pat of butter. called saturated fats blood cholesterol levels, nd such fats are found th plant and animal That's one reason why od & Drug Administrahas come down hard on food companies who et "no cholesterol" on for baked goods: The cts may actually contain levels of saturated fats tropical oils such as or coconut. tritionists recommend ou limit your saturated take as much as possin cooking, you can do by swapping saturated for unsaturated fats, as that contained in safflower, canola, olive, anut oil. In addition, reindings show that by usonounsaturated fats, ing olive and canola oil, ay help lower total chorol without lowering HDL.

ON FAT. But here's the Heart disease is not the yproduct of a fatty diet. lso been implicated in n kinds of cancer. Thus, an't just eat unlimited nts of unsaturated fats. diet plans such as Pritiecommend that fat not rise more than 10% of total caloric intake. while, the AHA and othay at minimum limit fat e to 30%.

educate yourself about ods you eat, turn to nu- books and healthful ooks to find calorie s, cholesterol and fat nts listed by grams and breakdowns of saturated and unsaturated fat. One suggestion: *The Chez Eddy Living Heart Cookbook* ($25; Prentice Hall), compiled by the doctors and staff of a gourmet restaurant in Houston's Methodist Hospital. You can calculate fat as a percentage of total calories by multiplying the grams of fat times 9 and dividing by the number of calories. If fat accounts for more than 30% of total calories, go easy on that particular food, or compensate by eating other very low-fat foods that day. Regulators also are pushing foodmakers to provide better fat content indicators on food labels.

Year-round adherence to a good diet is the key—not a Scrooge-like posture during the holidays. Advises Levine: "There are 10 holidays from Halloween to Super Bowl Sunday. It's not 10 days out of 90 that give you trouble. Eat what you like on the holidays, but take smaller portions." Skip the turkey skin. Take twice the salad and half the stuffing. But take a sip or two of eggnog if you want to.

If you are preparing meals, follow the example of entrepreneur Judy O'Shea, 46, cofounder of Cholestech, a Hayward (Calif.) company trying to develop better cholesterol tests and treatments. O'Shea roasts her turkeys with the skin off. She cooks the stuffing separately and puts only a small pat of butter in it. She uses monounsaturated oils. And her husband and seven kids don't complain: Her famous holiday dessert, meringue smothered in raspberries (minuscule fat and cholesterol), disappears in a twinkle.

Diet is the single most important factor in lowering cholesterol, but recent studies have reinforced the importance of exercise, too. Combining 90 minutes of aerobic exercise per week with dietary changes has been found to raise HDL levels while lowering total cholesterol.

GENE THERAPY? The jury's still out on alcohol, although many doctors believe a glass of red wine a day may in fact raise HDL levels. But beware of faddish solutions. "You can't have your steak and eat it, too," warns Cardiologist Thomas Bersot of the University of California at San Francisco's Gladstone Foundation Laboratories. "Focusing on drinking wine or oat bran takes away from the central message of lowering fat, especially saturated fat."

Researchers are still unlocking clues to the cholesterol puzzle. Some scientists believe doctors may someday be able to insert genes in people to counteract genetically inherited cholesterol problems. But in the meantime, get your cholesterol checked. Educate yourself about the fat content of the foods you eat. Maintain an exercise regimen. And if your numbers are still high, for heaven's sake, stay out of advertising. *Joan Hamilton*

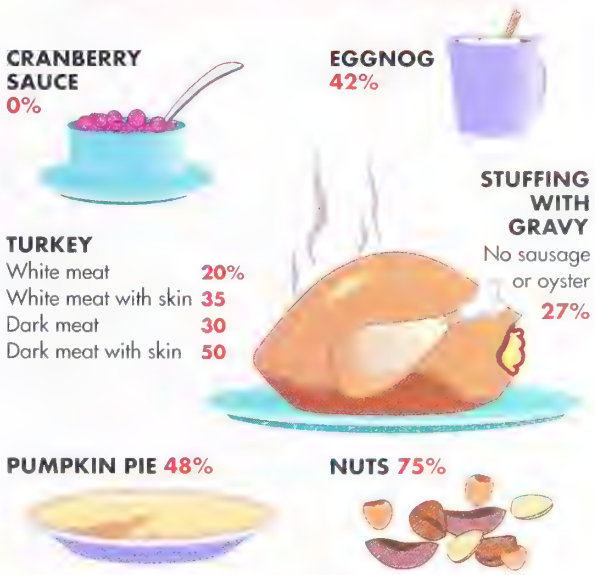
WAYS TO HELP YOUR HEART DURING THE HOLIDAYS

1. Know your cholesterol level: Your total cholesterol should not exceed 200; your LDL, or bad cholesterol, should not exceed 130
2. Try to exercise at least 90 minutes a week to lower total cholesterol but raise good HDL cholesterol levels
3. Eliminate high-cholesterol foods such as eggs, shellfish, and organ meats, but also pay attention to your fat intake as a percentage of total calories. It should not exceed 30%
4. Save high-fat or high-cholesterol foods you love for special occasions; then, take smaller portions of offenders and double up on salads and low-fat foods
5. If you cook, cut back on all oils, especially saturated fats, such as butter. Try to use monounsaturated fats such as olive, peanut, and canola oil, which appear to raise good cholesterol levels

DATA: AMERICAN HEART ASSN.; BW

THE FAT FROM SAUCE TO NUTS

FATS' SHARE OF TOTAL CALORIES:



TARGET FOR TOTAL FAT INTAKE: 30%

DATA: AMERICAN HEART ASSN., *FOOD VALUES OF PORTIONS COMMONLY USED*

Autos

A CADDY THAT CAN COMPETE

Ever since I saw a prototype of the 1992 Cadillac Seville at the Los Angeles Auto Show last January, I've been itching to drive that car. Even then, from its svelte good looks and toned-down interior, it seemed that an American company had finally come up with the right formula to compete with the Japanese. That's especially important for Cadillacs, as Lexus and Infiniti have used sophisticated styling and down-to-earth practicality to steal away sales.

I'm happy to report that the production version comes tantalizingly close to expectations. The styling is subtle, with softer angles that look like no Cadillac you've ever seen. And Cadillac has stripped off the glitz for the upscale STS—or Seville Touring Sedan—as well. The grille is the same color as the car's body instead of being chrome, the window moldings are black, and the stand-up Cadillac hood ornament has been rendered in pewter and moved down to a more inconspicuous station on the grille.

Cadillac has downplayed the technogadgets that plague most American cars. Instead, the curvaceous dash encloses traditional analog dials for speed, RPM, and fuel. What few digital displays remain—the outside temperature, for one—can be extinguished at the touch of a button. Best of all, a mechanical click has replaced the annoying turn-signal chime.

POISED. Sure, all the high-tech features you'd expect in a $38,000 luxury car are there. Leather seats are wide and perforated, with good lateral support and an inflatable l bar support that can moved up and down to fit height of the driver.

Where the STS comes u tad short is in driveability years past, Cadillac outfi the basic Seville with the low-soft ride its traditio customers demanded gave the sportier STS a s taut suspension. Now, C lac engineers are trying strike a compromise for STS with a computer-c trolled ride that tries to m driving conditions.

The suspension shifts t firm setting at free speeds, as well as during gressive cornering and b ing, where it does an adm ble job of taming body But for around-town cruis when it locks into the com mode, handling feels squi

So far, Cadillac is limi production to ensure qua Once at dealerships, the villes are going fast. they're doing the job Cadillac intended—lurin younger, import-consci buyer back into the U. S. ury fold. *Larry Armst*

Smart Money

HOPPING A FUND TO LANDS OF HIGHER YIELDS

With interest rates on U. S. CDs and bonds continuing to slide, some investors are doing more than look enviously at countries where rates run higher by 50% or more. By putting their dollars into a growing number of income funds that invest in short-term instruments in Europe and elsewhere, they're aiming for yields of 8% and better.

That kind of potential attracted $140 million to Fidelity's new Short-Term World Income Fund in just the past two months. A similar Scudder fund begun last March has ballooned to about $280 million, and one that Blanchard started in January has hit the $1 billion mark. Investors in such funds look for higher yields, and perhaps a boost from a weakening dollar. "These are good investments right now," says Walter Frank at IBC/Donoghue, which tracks fund performance. "And they should be good for the next several months—until U. S. interest rates head up and rates overseas start coming down."

RISKY RATES. Most of the new funds are no-load, unlike the pioneering Alliance Short-Term Multi-Market Trust, which has grown to $7 billion since 1989, or Merrill Lynch's $6 billion Short-Term Global Income Fund began a year later. While some of the funds let you write checks, as you can with a money-market fund, they lack a money-market fund's safety because they involve both interest-rate and currency fluctuations.

The funds try to minimize interest-rate risk by sticking to short-term investments, nothing more than three years and usually considerably less (table). But a more important safeguard is the portfolio mix. Funds heavily invested in countries such as Australia and New Zealand whose currencies are likely to weaken against the dollar, are probably not good bets.

REACHING FOR RICHES ABROAD

Fund	Yield Percent	Minimum investment	Average maturity
BLANCHARD	9.4	$3,000	29 mos.
FIDELITY	8.0*	2,500	13 mos.
SCUDDER	9.7	1,000	16 mos.

* In fund's first two months

DATA BW

Most funds try to redu risk caused by currency fl tuations with some comp hedging strategies and by versifying their portfol widely. For example, wh Finland recently devalued currency by about 1 against the dollar, it affec Scudder's Short Term Glo Income Fund, where Finn instruments make up 7% its portfolio. But Portf Manager Adam Gresh points out that 15% is in U instruments, 12% in D mark's, 11% in Mexico's, a so on: "All in all, we're in countries and 9 different c rencies, so the $12 sh price dropped only about 7

So if you hop on a fund richer returns overse don't get rattled by the da headline from any one co try. But keep one eye month-by-month moves the share price, the other the width of the gap betwe interest rates at home a abroad. *Don Du*

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Travel

SKI TRAILS LESS TRAVELED: ITALY'S VALLE D'AOSTA

If you want to ski in the Alps and avoid the mad- [illegible] Olympics, in Albertville, France, consider the Valle d'Aosta in Italy's northwest corner. Largely French-speaking, this wine- and cheese-producing region has world-class ski resorts on some of Europe's highest mountains.

The Valle d'Aosta is rich in historical and cultural attractions, too. You can see the remains of Roman aqueducts, and throughout the region, medieval castles and monasteries perch on the hills. Many of these sites, such as the castles of Fenis, Aymavilles, and Issogne, are open to visitors. For an extra diversion, you can go to Europe's largest casino in St. Vincent.

Valle d'Aosta also stands out for its hearty cuisine. The high slopes produce a small but fine selection of wines. The pungent local Fontina cheese appears on rice and potato gnocchi, in soups, and in fondue. Soups such as *bagna cauda* are seasoned with mountain herbs and flowers. Prosciutto lovers should try *mocetta*, a salt-cured meat made from chamois, a goatlike antelope. After the meal, sip *grappa* flavored with fruits and herbs.

Cervinia, the largest resort, has a dizzying choice of downhill trails at the foot of the Matterhorn. Modern lifts, such as a new cable car that carries 140 people per cabin, have done away with lines. Ninety miles of trails include a 14-mile ski from the Plateau Rosa down to the next village, Valtournanche, where a gondola will take you back up.

For an extra $21 with your Cervinia ski pass ($30 for one day; $150 for six days), you can ski over the Swiss border to Zermatt, where cars are banned. Closer to Cervinia, a town of modern buildings, lies [illegible] Ages, this cluster of chalets and churches can be reached only by cable car. From here you can ski to Valtournanche and back to Cervinia.

APRES-SKI: ST. VINCENT'S CASINO IS EUROPE'S BIGGEST

Among the wide choice of hotels, one of the most romantic is Les Neiges d'Antan, a 28-room rustic chalet on a pinnacle two miles from Cervinia's busy center. A double room without meals costs $74 a night.

Courmayeur offers 80 miles of ski trails at the foot of Mont Blanc, Europe's highest peak. In spring, if you're an expert skier, hire a guide for the 11-mile run along the glaciers of the Vallée Blanche to Chamonix in France. For the less experienced, there's a cable car to Chamonix. Or you might drive 10 miles to Italy's La Thuile, where a $30 day pass gives you 83 miles of cross-border trails with La Rosière in France.

LESS GLITZ. Courmayeur has some of the best hostelries and restaurants in the valley. Try the elegant Hotel Pavillon ($179, double) or the small Palace Bron ($160 to $235), with its first-rate restaurant. In the nearby gingerbread village of Entrèves, taste regional dishes at La Maison de Filippo. The locals prefer to eat at the Armandina trattoria in the hamlet of La Palud and to meet for coffee at Courmayeur's Caffè della Posta in Via Roma. Italiatour (800 237-0517), Alitalia's tour operator, offers one-week packages to Courmayeur and [illegible] from the U.S. for $1,350 to $1,900.

Cross-country skiers and those who don't like the mink-and-Mercedes crowd would do better at the less glitzy Cogne, a medieval village inside Gran Paradiso National Park. One of Cogne's great attractions is the Hotel Bellevue ($130 to $160, double), where, until World War II [illegible] aly's royal family stayed [illegible] hunting expeditions.

For a more intimate a[illegible] sphere, there's Notre Mai[illegible] a chalet with only 10 ro[illegible] ($73 to $85 per person, [illegible] full board). Lou Ressig[illegible] Cogne's top restaur[illegible] serves an array of dis[illegible] made with Fontina cheese.

MEDIEVAL CASTLES PERCH ON THE [illegible]

A last bit of advice on [illegible] ing: If you're with a gr[illegible] drink from the after-m[illegible] *coppa dell'amicizia*, a [illegible] ered wooden "friendship [illegible] with multiple spouts, [illegible] with coffee, sugar, *grap*[illegible] and orange or lemon pee[illegible] you're alone, it's worth [illegible] friending the folks at the [illegible] table. *Sabrina K*[illegible]

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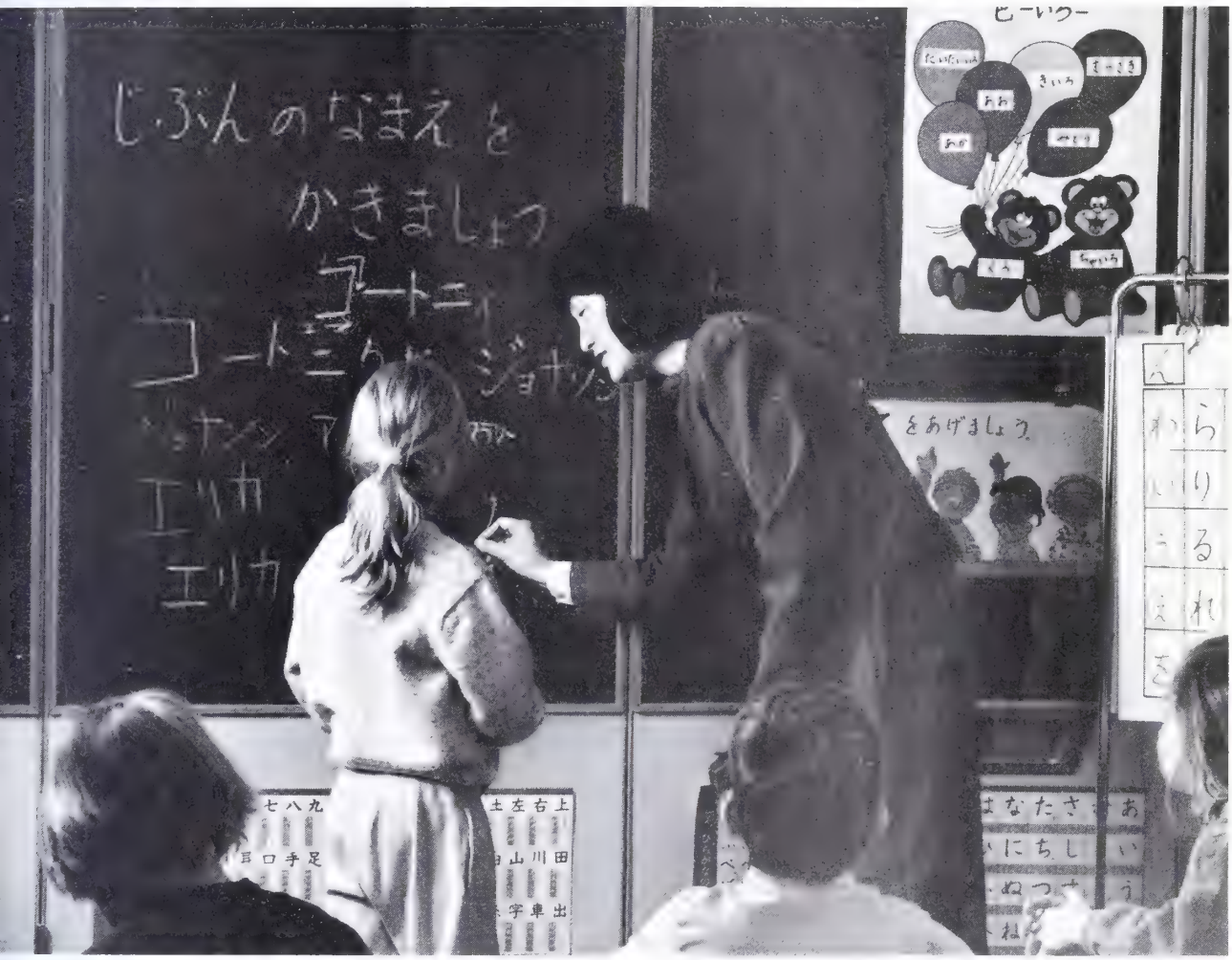

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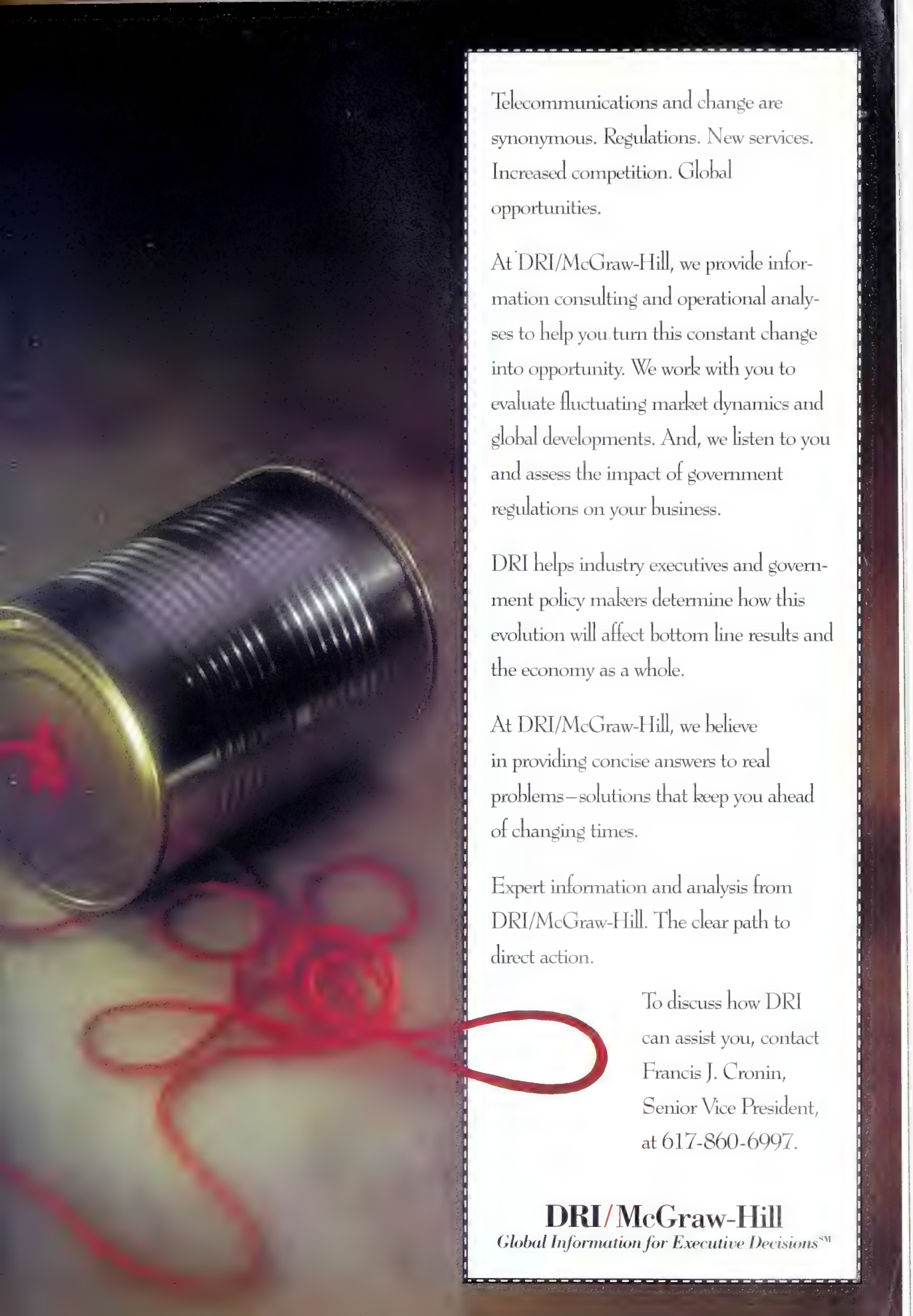

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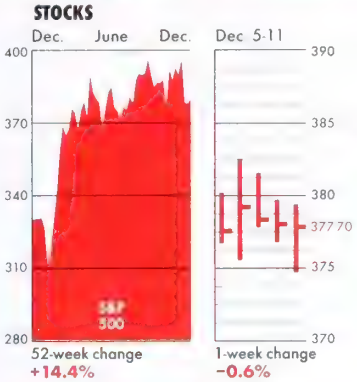
s spurned equities as more e companies announced nd gloom over the econ- ead. The big hits came in -chip industrials, but com- ith overseas markets the was modest. Bonds rallied esponding to the Federal 's easier money policy, and shorter maturities contin- all. Oil prices were heading flecting the weak global y and an increase in crude . No wonder oil shares en among the worst per- recently.

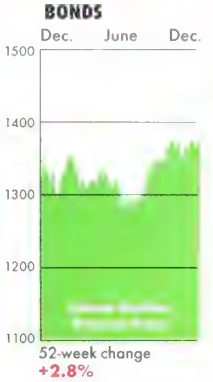
STOCKS



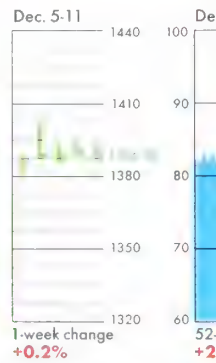
52-week change **+14.4%**

1-week change **−0.6%**

BONDS

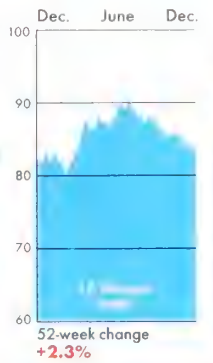


52-week change **+2.8%**



1-week change **+0.2%**

THE DOLLAR



52-week change **+2.3%**

1-week change **−0.8%**

RKET ANALYSIS

TOCKS	Latest	% change Week	% change 52-week
NES INDUSTRIALS	2865.4	−1.6	9.3
IPANIES (Russell 1000)	199.9	−0.6	16.8
OMPANIES (Russell 2000)	174.7	−1.8	33.8
IPANIES (Russell 3000)	212.5	−0.7	17.7

GN STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
(FINANCIAL TIMES 100)	2380.2	−1.8	9.9
NIKKEI INDEX)	21,502.9	−5.1	−10.4
(TSE COMPOSITE)	3351.9	−2.2	3.1

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.24%	4.43%	7.1%
30-YEAR TREASURY BOND YIELD	7.81%	7.85%	8.1%
S&P 500 DIVIDEND YIELD	3.25%	3.22%	3.6%
S&P 500 PRICE/EARNINGS RATIO	21.0	21.1	15.1

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.4	384.5	Negative
Stocks above 26-week moving average	38.9%	42.9%	Neutral
Speculative sentiment: Put/call ratio	0.47	0.43	Positive
Insider sentiment: Vickers sell/buy ratio	2.07	2.12	Neutral

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC

WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
UTION CONTROL	7.2	4.5	WASTE MANAGEMENT	8.7	10.3	38 7/8
DRINKS	7.2	37.4	COCA-COLA	7.9	52.8	71 5/8
MINING	6.6	0.3	NEWMONT MINING	12.6	31.3	43 1/2
ALTY APPAREL RETAILERS	6.6	102.1	GAP	10.3	226.2	53 5/8
HINE TOOLS	5.6	0.1	CINCINNATI MILACRON	11.9	−7.4	9 3/8
WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
ND GAS DRILLING	−20.3	−40.8	ROWAN	−28.6	−54.0	5
LS	−18.7	−1.2	ASARCO	−23.2	−25.7	19 1/2
RSIFIED MACHINERY	−15.7	1.6	VARITY	−32.1	−36.5	13 1/2
ESTIC OIL	−15.1	−19.7	ORYX ENERGY	−20.7	−41.3	24
RE TIME	−14.6	19.6	HANDLEMAN	−29.4	7.9	12

TUAL FUNDS

MORNINGSTAR INC

RS

ek total return	%
TEGIC INVESTMENTS	10.6
ED SERVICES GOLD SHARES	7.5
IAM GOLD EQUITIES INDEX	7.3

t total return	%
ENHEIMER GLOBAL BIO-TECH	115.3
RWEIS EMERGING GROWTH	82.8
LITY SELECT BIOTECHNOLOGY	81.5

LAGGARDS

Four-week total return	%
FIDELITY SELECT ENERGY SERVICE	−15.1
METLIFE-STATE STREET GLOBAL ENERGY	−14.7
SCHIELD AGGRESSIVE GROWTH	−11.8

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−21.1
USF&G EUROPEAN EMERGING COMPANIES	−15.8
METLIFE-STATE STREET GLOBAL ENERGY	−13.0

ATIVE PORTFOLIOS

DATA RESOURCES INC.

amounts
ent the present
of $10,000
d one year ago
portfolio
tages indicate
y total returns

U. S. stocks	Foreign stocks	Treasury bonds	Money market fund	Gold
$11,876	**$11,682**	**$11,550**	**$10,531**	**$9,584**
−0.80%	−0.63%	+1.21%	+0.09%	+1.09%

on this page are as of market close Wednesday, Dec. 11, 1991, unless otherwise indicated. groups include S&P 500 companies only; performance and share prices are as of market close Dec.10. Mutual fund returns are as of Dec. 6. Relative portfolios are valued as of Dec. 10. A more detailed explanation of this page is available on request

Editorials

NEW MORGAN, OLD VERITIES

Banks occupy a special place in our financial system. Though owned by shareholders, they are quasi-governmental institutions that receive a variety of government subsidies. When they take risks, taxpayers as well as shareholders are on the line, along with depositors' funds. As a result, banks have special responsibilities to behave prudently—which is just what many did not do during the past decade of wretched financial excess.

One that did behave is J. P. Morgan & Co., helping it become the most profitable major bank in the U. S., whether measured in terms of absolute dollars or return on equity (page 64). Morgan's record is not unblemished: Like most major banks, it lent billions of dollars to less developed countries during the 1970s and early 1980s that it never got back. But Morgan learned from that debacle. While competitors rushed into high-risk real estate and leveraged-buyout lending during the latter part of the 1980s, Morgan, then shifting resources away from lending anyway, stayed on the sidelines.

More generally, Morgan has stubbornly resisted fads that afflict the world of finance and has stuck to old-style corporate verities. The bank stresses tradition and teamwork. It works hard to maintain a strong capital base and its vaunted AAA credit rating. It takes a long-term approach to strategy: Morgan has spent the better part of a decade methodically transforming itself from a loan-dependent commercial bank into a fee-generating Euro-style "universal" bank with capabilities in all major facets of finance. Pursuing that strategy at times hurt the bank's short-term earnings, but despite second thoughts among some executives, it persevered. Thus it was less damaged by the corporate move away from bank borrowing than many of its competitors. Finally, Morgan is unusually sensitive to the needs of its employees. Rather than routinely recruiting from the outside, it fills most openings from within the bank.

Of course, it's easier for a bank with $102.6 billion in assets and the name of J. P. Morgan to accomplish all of this. Yet franchises are not indestructible. In an industry littered with horror stories, Morgan's chief accomplishment is to serve as a useful template of financial prudence and long-range planning for its industry.

LEARNING TO LIVE WITH SUPEREUROPE

Despite all the doubters, Europe agreed at Maastricht, the Netherlands, to adopt a single currency by Jan. 1, 1999. The European Currency Unit, or ECU as it will be known until a new name is adopted, seems sure to be firmly rooted in low inflation and small budget deficits. Foreigners, once eager to hold dollars and buy dollar debt, will have an alternate—and potentially more attractive—place to invest their cash. Anticipation of the common currency's arrival will also give a fillip to EC92, the European Community's program to eliminate internal trade barriers by the end of next year. Both developments give the U.S. food for thought (page 40).

The ECU won't dethrone the greenback overnight. But an attractive alternative to the dollar, which hasn't existed since sterling folded in the late '70s, will make it harder to time for the U. S. to run up huge federal deficits financed by foreign capital. Then, too, a stronger integration of Europe's industrial and commercial economy risks putting the U.S. further out on a trade limb. Many European countries already do more than half their trade with neighbors in Europe. Three-quarters of German foreign trade, for instance, is with other West European nations. A common currency will lift those ratios even higher and increase Europe's clout in trade talks.

The temptation, particularly on Capitol Hill, will be to read all this as auguring an inexorable move to Fortress Europe. Congress should resist the urge to respond by building walls around a Fortress North America or even a Fortress Western Hemisphere. The U. S. rightly insists that the EC must open its highly protected market for farm products. The way to achieve this is by negotiation in the General Agreement on Tariffs & Trade and other forums—not by shouting "foul!" through a bullhorn as a preliminary to peremptory demands. More than ever, as Europe creates a formidable economic union, the U. S. needs it as a partner—not an adversary in trade wars.

CADDY ROARS ONTO THE RIGHT TRACK

In these days of dismal car sales, off 8% since their peak in July, one U. S. auto maker faces an enviable problem. Orders for Cadillac's new Seville sedan outstrip the General Motors Corp. division's ability to make them. At long last, it seems, Motown has designed a car that comes close to competing with Europe's and Japan's best.

More important, the customer waiting list suggests Cadillac's arduous struggle to remake itself during the 1980s is paying off. The Seville is the first all-new Cadillac designed by a close-knit team of suppliers, assembly workers, marketers, and engineers. It's a technique Japanese competitors have employed successfully for years, and that Detroit still is struggling to adopt. The result is a sleek, styled auto designed to appeal to the international tastes Detroit has chronically ignored (page 98). And it's more agile than the outsized land yachts of yore.

Of course, it will take several years of hard driving before we know if the Seville can match the enviable durability of some of its competitors. But Cadillac clearly has its priorities straight: Instead of furiously cranking out cars to meet demand, it's holding back to assure good quality while it debugs the Seville's new assembly line. That kind of long-term thinking could finally help Detroit stem the flow from Japan to America of the cars and parts that account for 75% of the $40 billion U. S. trade deficit with Japan.

December 30 JANUARY 6, 1992

YEAREND DOUBLE

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WHERE TO INVEST IN 1992

STOCKS THE BULLS ARE STILL IN CHARGE

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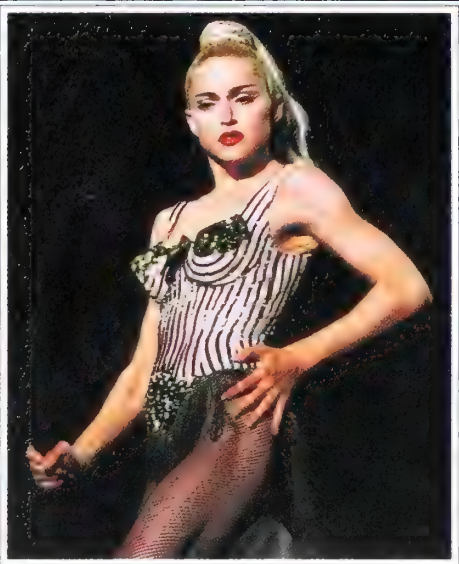
DECEMBER 3



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Hail Gorbachev—and farewell

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Don't let the economy scare you: Despite a lackluster excuse for a recovery, opportunities abound

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A slight upturn may arrive in the second half of the year, but structural economic problems will remain

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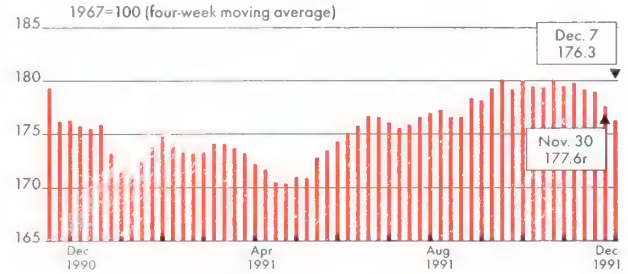
sinessWeek Index

PRODUCTION

Change from last week: −0.7%
Change from last year: 0.3%

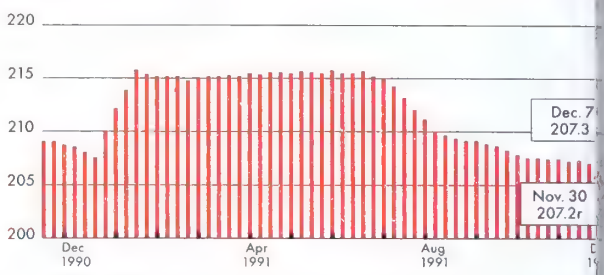


The production index fell during the week ended Dec. 7. On a seasonally adjusted basis, output of electric power, crude-oil refining, coal, and paperboard declined. Rail-freight traffic and steel, auto, truck, and lumber production increased. Paper output was unchanged. Before calculation of the four-week moving average, the index rose to 175.8, from 171.6 in the previous week. However, that reading was probably depressed by the later-than-usual Thanksgiving holiday.

BW production index copyright 1991 by McGraw-Hill Inc

LEADING

Change from last week: 0.1%
Change from last year: −0.6%



The leading index edged up slightly for the week ended Dec. 7, but the ind is no higher than it was in mid-November. Higher stock prices, lower bond yiel and improvement in the growth of materials prices offset a small gain in the numb of business failures and slower growth rates in both real estate loans and M Before calculation of the four-week moving average, the index dropped to 207, fr a reading of 207.2 in the previous week.

Leading index copyright 1991 by Center for International Business Cycle Research

PRODUCTION INDICATORS

	Latest week	Week ago	% Change year ago
STEEL (12/14) thous. of net tons	1,751	1,614#	2.3
AUTOS (12/14) units	127,718	123,785r#	1.6
TRUCKS (12/14) units	76,353	80,563r#	25.6
ELECTRIC POWER (12/14) millions of kilowatt-hours	54,965	56,284#	−1.0
CRUDE-OIL REFINING (12/14) thous. of bbl./day	13,434	12,738#	5.3
COAL (12/7) thous. of net tons	19,321#	15,756	−11.1
PAPERBOARD (12/7) thous. of tons	797.0#	824.0r	4.9
PAPER (12/7) thous. of tons	774.0#	776.0r	0.7
LUMBER (12/7) millions of ft.	483.1#	301.5	3.5
RAIL FREIGHT (12/7) billions of ton-miles	20.7#	16.6	−1.0

Sources: American Iron & Steel Institute, *Ward's Automotive Reports*, Edison Electric Institute, American Petroleum Institute, Energy Dept., American Paper Institute, WWPA[1], SFPA[2], Association of American Railroads

FOREIGN EXCHANGE

	Latest week	Week ago	Year ago
JAPANESE YEN (12/18)	128	129	135
GERMAN MARK (12/18)	1.57	1.58	1.52
BRITISH POUND (12/18)	1.83	1.81	1.90
FRENCH FRANC (12/18)	5.37	5.40	5.15
CANADIAN DOLLAR (12/18)	1.15	1.14	1.16
SWISS FRANC (12/18)	1.39	1.40	1.30
MEXICAN PESO (12/18)[3]	3,060	3,045	2,941

Sources: Major New York banks. Currencies expressed in units per U. S. dollar, except for British pound expressed in dollars

PRICES

	Latest week	Week ago	% Change year ago
GOLD (12/18) $/troy oz.	357.900	366.500	−5.5
STEEL SCRAP (12/17) #1 heavy, $/ton	93.00	93.00	−12.3
FOODSTUFFS (12/16) index, 1967=100	205.9	205.6	−2.1
COPPER (12/14) ¢/lb.	102.4	105 8	−10.5
ALUMINUM (12/14) ¢/lb.	50.4	49.9	−28.0
WHEAT (12/14) #2 hard, $/bu.	3.98	3.95	42.1
COTTON (12/14) strict low middling 1-1/16 in., ¢/lb	53.91	53.85	−23.3

Sources: London Wednesday final setting, Chicago market, Commodity Research Bureau, *Metals Week*, Kansas City market, Memphis market.

LEADING INDICATORS

	Latest week	Week ago	% Cha year
STOCK PRICES (12/13) S&P 500	379.98	379.78	17
CORPORATE BOND YIELD, Aaa (12/13)	8.35%	8.39%	−5
INDUSTRIAL MATERIALS PRICES (12/13)	94.2	95.6	−6
BUSINESS FAILURES (12/6)	460	456r	3
REAL ESTATE LOANS (12/4) billions	$395.3	$395.6r	
MONEY SUPPLY, M2 (12/2) billions	$3,405.3	$3,408.1r	7
INITIAL CLAIMS, UNEMPLOYMENT (11/30) thous.	414	475r	−11

Sources: Standard & Poor's, Moody's, *Journal of Commerce* (index: 1980=100), Du Bradstreet (failures of large companies), Federal Reserve Board, Labor Dept. CIBCR seasonally justs data on business failures and real estate loans

MONTHLY ECONOMIC INDICATORS

	Latest month	Month ago	% Cha year
HOUSING STARTS (Nov.) annual rate, thous	1,066	1,089r	−7
INDUSTRIAL PRODUCTION (Nov.) total index	107.8	108.2	5
CAPACITY UTILIZATION (Nov.)	79.1%	79.6%	−1
CONSUMER PRICE INDEX (Nov.)	137.8	137.4	3

Sources: Commerce Dept., Federal Reserve Board, BLS

MONETARY INDICATORS

	Latest week	Week ago	% Cha year
MONEY SUPPLY, M1 (12/2)	$901.9	$890.4r	1
BANKS' BUSINESS LOANS (12/4)	292.6	294.3r	−11
FREE RESERVES (12/11)	454	820r	−4
NONFINANCIAL COMMERCIAL PAPER (12/4)	134.8	134.1	−7

Sources: Federal Reserve Board (in billions, except for free reserves, which are expressed fi two-week period in millions).

MONEY MARKET RATES

	Latest week	Week ago	Y
FEDERAL FUNDS (12/17)	4.50%	4.40%	7.2
PRIME (12/18)	7.50	7.50	10.0
COMMERCIAL PAPER 3-MONTH (12/17)	4.56	4.63	7.7
CERTIFICATES OF DEPOSIT 3-MONTH (12/18)	4.43	4.46	7.7
EURODOLLAR 3-MONTH (12/14)	4.45	4.80	7.5

Sources: Federal Reserve Board, First Boston

#Raw data in the production indicators are seasonally adjusted in computing the BW index (chart); other components (estimated and not listed) include machinery and defense equipm
1=Western Wood Products Assn. 2=Southern Forest Products Assn. 3=Free market value NA=Not available r=revised NM=Not meaningful

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Readers Report

THE RICH GET POORER, AND THE POOR GET POORER?

I have been reading for some time how I have been getting better off (in the top 5% of income) over the past 10 years ("The rich are richer—and America may be the poorer," Economics, Nov. 18). Funny though, I haven't actually seen it.

The biggest fiction is that the Reagan "tax cut" benefited the rich—dropping the 50% top tax rate to 28%. I was against this tax cut as soon as it was suggested. Because what was also cut were a lot of tax shelters built into the tax structure to get investors to put money into risky segments of the economy, such as oil and gas drilling, low-income housing, etc. The effect of the elimination of tax shelters was to more than triple my federal and state taxes, money that I will never see again.

On top of this, none of these tax shelters was grandfathered. So the tax system rewarded investment in risky areas for many years, and some people such as myself had followed the government's lead to a tune of around a half-million dollars. Suddenly, tax shelters were eliminated, and now I'll be lucky to get 10¢ on the dollar.

In my personal case, I have become much poorer over the past 10 years in in-pocket income as well as value of my investments. And now everyone is talking about soaking the rich even more. I would love to go back to the 1970s and 1980s, when us rich were not so rich. My pocketbook and balance sheet would very much appreciate the change.

Hal F. Mather
Atlanta

You argue that everyone agrees that "the widespread technological and competitive changes that occurred during the 1980s induced a sharp increase in the rewards for skill and education." Then you conclude that "income distribution," "income inequality," and "child poverty" are the root causes of America's woes.

If that's the case, incomes haven't become "more unequal"—as if, in open economies, supply and demand have to be equal. The old supply and demand patterns are gone, and new ones need to be identified, adapted to, and capitalized on. "Income distribution" is not the issue. A global pool of less skilled workers depressing demand for less skilled U.S. workers is. What does this mean for American companies and workers?

Money can't be made the old way. "Competitiveness" means doing it better for less, so learn how to do it better for less. Old assumptions and expectations are dead, and the new ones are global. So either keep the old ones and learn to live with less, or learn the new ones and have the problems of learning to live with more.

Solve your own problem and enjoy long-term solutions or let others solve it and suffer short-term solutions. Protectionism tells us nothing about how to cope under new conditions. Losers depend on help; winners only ask that the conditions be created that let them solve their own challenges and opportunities.

"The government" can never improve the competitive skills of any one individual worker or firm.

Henry E. Adams
San Diego

WHERE THOSE TOUGH BOSSES COME FROM

Great story, "Tough times, tough bosses" (Cover Story, Nov. 25). It's probably worth noting that three out of the five featured on your cover were from General Electric Co. (Lawrence Bossidy, Norman Blake, and Stanley Gault).

As recruiters, we know where the talent is being developed. Reginald Jones and Jack Welch (GE's former and present CEOs) deserve much credit not only for building and running a great corporation but also for raising the level of management competency beyond GE.

Gerard R. Roche
Chairman
Heidrick & Struggles Inc.
New York

It is very discouraging to see that Corporate America is, even more than usual, turning to the worship of the "Tough Guy." There are two problems with toughness: First, only males are

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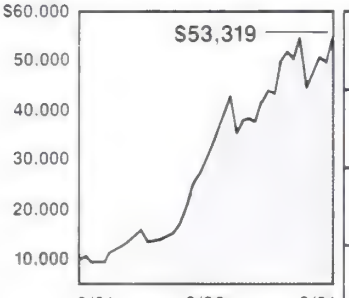

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5 years 12.1%
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*Lipper Analytical Services, Inc., ranked the International Stock Fund #28 of 636 #271 of 1,611, and #967 of 3,054 funds for the 10-, 5-, and 1-year periods ended 9/30/91, respectively.
**Chart shows cumulative total return of $10,000 invested 9/30/81 to 9/30/91. Figures include changes in principal value, reinvested dividends, and capital gain distributions. Total return represents past performance and cannot guarantee future results. Investment return and principal value will vary, and shares may be worth more or less at redemption than at original purchase.
T. Rowe Price Investment Services, Inc., Distributor.

Readers Report

allowed to be tough. In general, our c ture will reject females who exh toughness. Once in a while a "tough e male" makes it (cf. Margaret Thatch but for the most part, they are quic eliminated from the system beca who, after all, wants a bitch around toughness is the primary requisite getting to the top, then, by definition, culturally acceptable women can po bly get there.

Second, is toughness really the w we are going to make America m competitive? How much better it wo be for America if, instead of throw 4,000 to 5,000 people out on the str we could find enlightened leaders could motivate, inspire, and ener those same people to find/develop vent/make better products and servi or to creatively develop whole new m kets in the U.S. or abroad.

Isn't it time we go beyond cave tactics and the bloody mutilation of business society and look to worship and promoting not toughness but more important skills of human intell and inspiration in making America m competitive? Our country will be a th sand times better off and, additiona 50% of the population—i.e., women—w have some chance of making it to t top and contributing their talents a skills to making America a strong a dynamic world force.

Ruthanne G. Ne
Downingtown, P

The U.S. was once a rich nation w a bright future. We were rich cause of our natural resources and cause we invested in people. Today are being outmanaged in many mark by nations that invest in people fr prior to their birth to the end of th lives.

The result is that these people arr in the workplace better prepared to gin their careers, and their compan invest heavily in their training and dev opment throughout their careers.

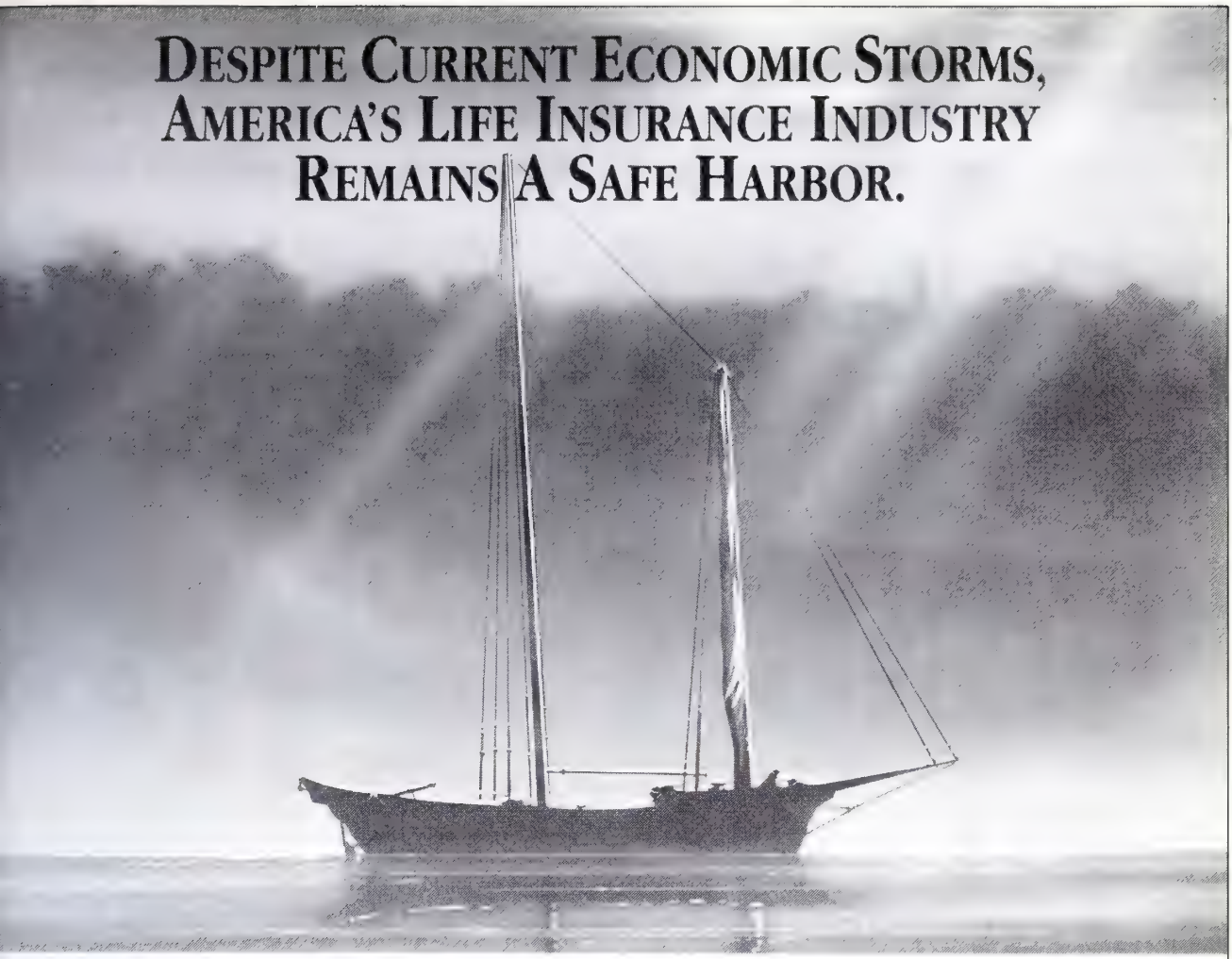
Robert Cr
Fayetteville, C

MORE REGULATIONS WON'T MEAN CLEANER AIR

Unfortunately, regulators are a dressing the effect, not the cause auto emissions: namely the millions older, poorly maintained vehicles in op ation ("Here come the greenmobile Top of the News, Nov. 11).

Of the 180 million vehicles currently operation, more than 58 million (32.4 cars and trucks are over 10 years old. tests conducted in California, the st with the oldest fleet of vehicles in ope

DESPITE CURRENT ECONOMIC STORMS, AMERICA'S LIFE INSURANCE INDUSTRY REMAINS A SAFE HARBOR.



The current economic downturn has affected all financial institutions. One result is that consumers are looking more closely at life insurance companies. What they are finding is a strong, secure industry that has weathered economic storms for more than two centuries.

While some companies have had financial problems, the experts agree that, overall, the life insurance industry remains strong, safe and stable:

"The life insurance industry is very strong contrasted to other industries with which it competes. We see basically the life insurance industry as an 'AA' type business. Next to the U.S. government, the life insurance industry is one of the safest places for people and companies to put their funds that exists today."

Duff & Phelps Credit Rating Company

"...S&P believes that, overall, life/health insurers are relatively stronger than other types of financial services companies. Compared to thrifts and banks, most insurers are more soundly positioned due to stronger capitalization, better asset quality and liabilities with longer and more predictable durations. Seriously troubled insurers represent a small percentage of the life/health universe..."

Standard & Poor's Insurance Rating Services

The fact is, the life insurance industry remains what it has always been throughout its 232-year history: A safe, snug harbor providing financial security for American families.

If you would like more information about America's life insurance industry, write for our free brochure, "Building on a Strong Foundation: Answers to Your Questions About Life Insurance."

American Council of Life Insurance

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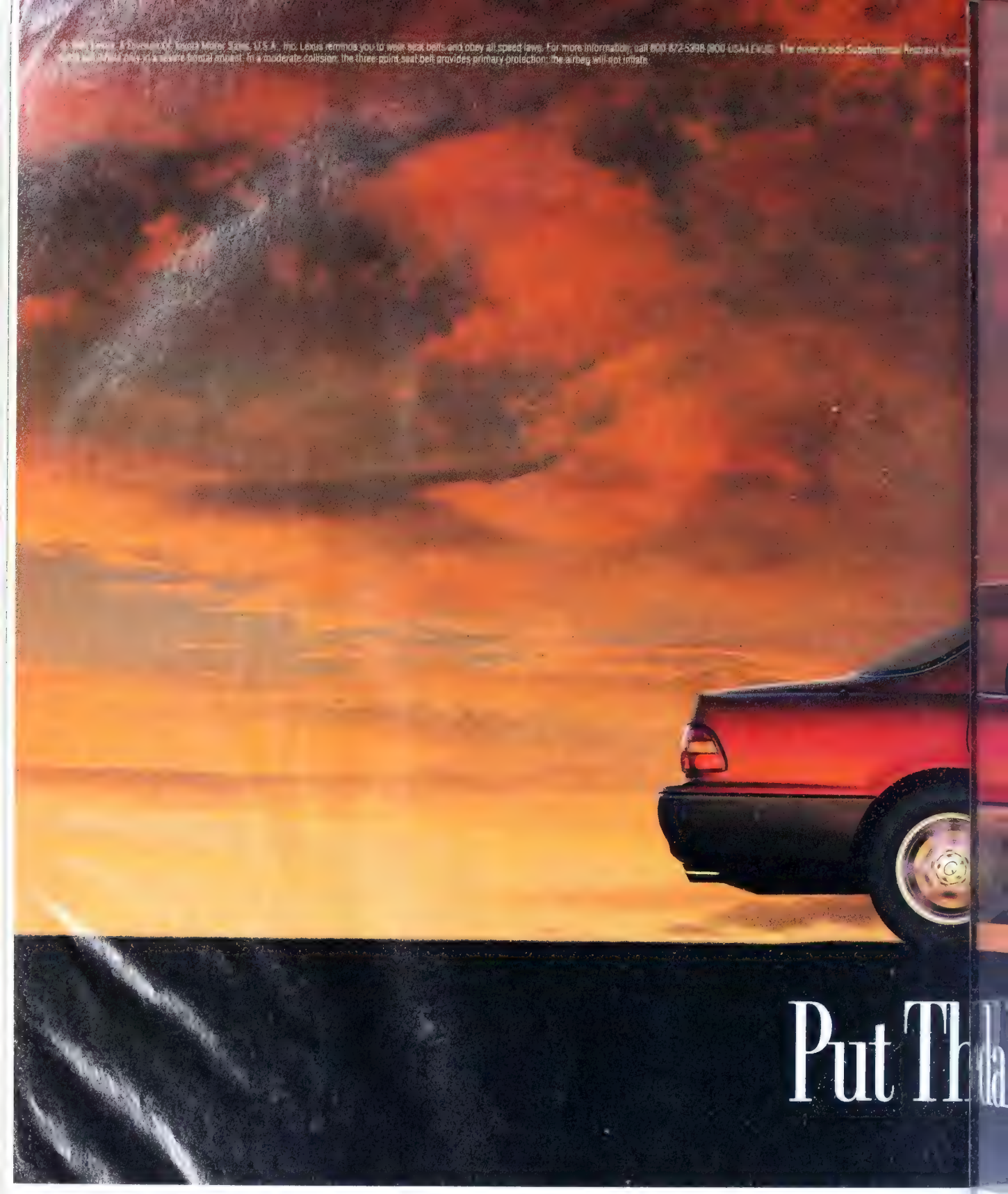
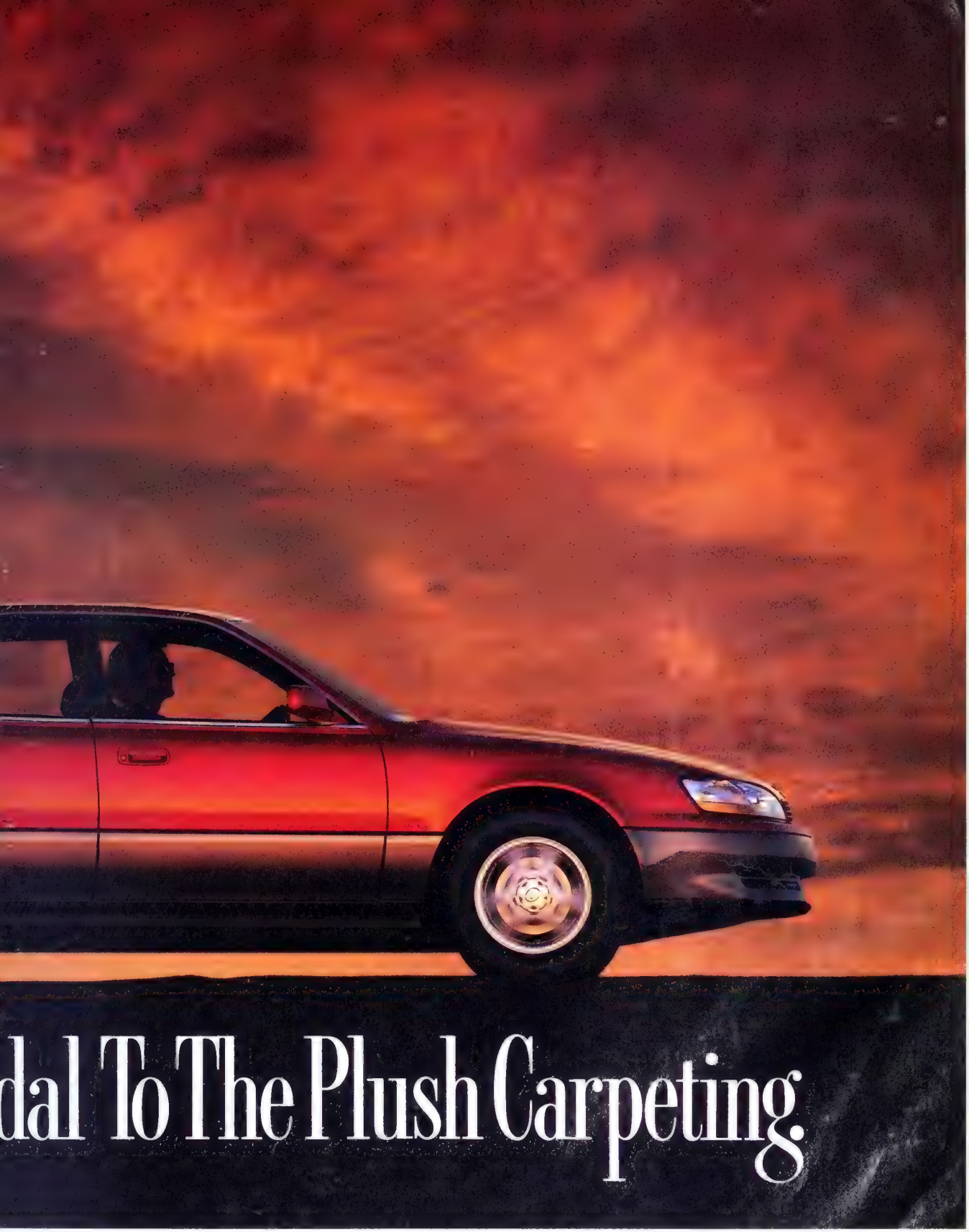


The ES300 Sports Sedan

185-horsepower 24-valve V6

Multi-link strut suspension

Anti-lock braking system



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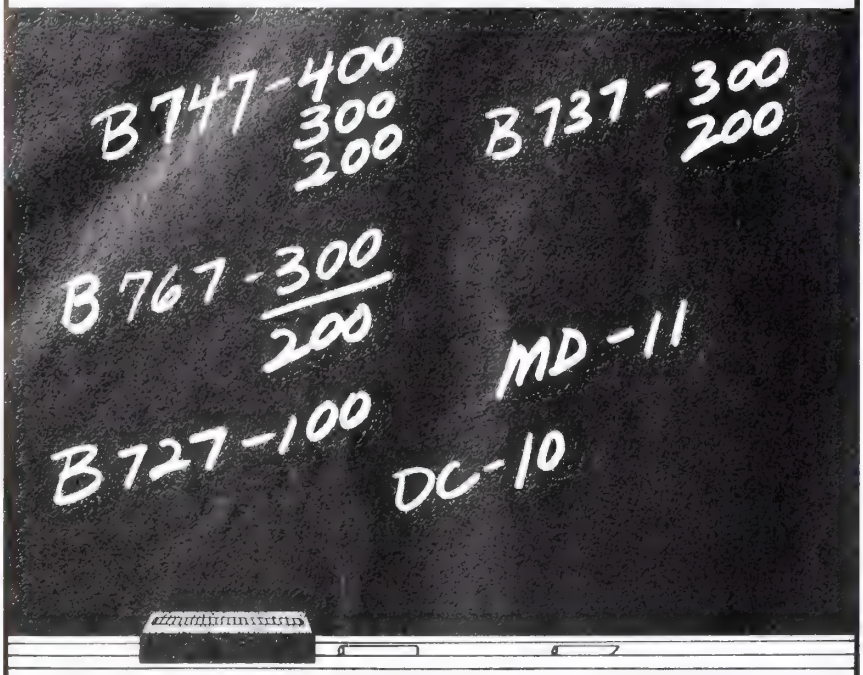

These are just some of the numbers that identify the planes in VARIG's vast fleet. Latin American carriers have recently ordered 38 new aircraft—29 of these were ordered by VARIG.

All of our equipment is maintained with the newest, most effective technologies available today. All are enthusiastically endorsed by not only VARIG's legion of passengers, but by our pilots and crews as well.

VARIG flies throughout South America and to no less than 43 cities in 33 countries on 5 continents and is one of the world's 20 largest airlines.

Together all these impressive numbers add up to VARIG, the number one airline among business travelers to Brazil, who demand and appreciate excellence.

Everything you wished an airline was, VARIG is. We serve Brazil, the rest of South America and Japan with 31 flights a week from North America.

VARIG

The World Class Airline of Brazil
Since 1927

Readers Report

tion, it was demonstrated that precat lyst vehicles recently taken out of se vice emitted 65 times more hyrocarbo 47 times higher carbon monoxide, and times greater oxide of nitrogen than 1990 model car. Furthermore, the ave age fuel economy was 11.9 mpg, le than half of today's largest V-8 engine

Government regulations will cost th automotive industry $12 billion to $1 billion over the next several years, an those costs can only result in higher r tail prices. Higher prices, in turn, w only result in reduced new-vehicle sal and the prolonged use of older, pollutin vehicles.

What this country needs is a nation energy policy rather than more regul tions, more red ink, and more (rathe than less) auto emissions. A $2,500 t $3,500 retail price increase can only r sult in disaster for the auto manufactu ers and our air quality.

Dennis Vira
Ann Arbor, Mic

TRUMP: 'I HAVE NOT CEDED CONTROL'

Once again, BUSINESS WEEK has ma aged to inaccurately mangle Do ald Trump. Your recent story "Finan ing the '90s" (Special Report, Nov. stated, "last year, he [Trump] had t cede control of his hotel, airline, and c sino kingdom . . ."

This statement is totally false. While don't know which hotel "his hotel" re fers to, as I have several, I have no ceded control, I will be selling my airlin for a substantal price (and substantiall reducing my debt), and my "casino king dom" is fully intact and owned by me.

Donald J. Trum
The Trump Organizatio
New Yor

DON'T BE TOO QUICK TO OVERHAUL THE PATENT SYSTEM

As a career intellectual-property law yer who has worked in both th corporate and private sectors for ove three decades, I express my kudos t your writers for their balanced over view, "Is it time to reinvent the paten system? (Legal Affairs, Dec. 2). I tak issue only with the premise that ou long-term legal nod to the first-to-inven precept is outmoded in our fast-paced high-tech era.

Rewarding only the swiftest in th race to the patent office, often by a so phisticated and well-financed corporat inventor, will further undercut the firs innovator, who is often an independen inventor or a small business venture The nuisance to big business of paying

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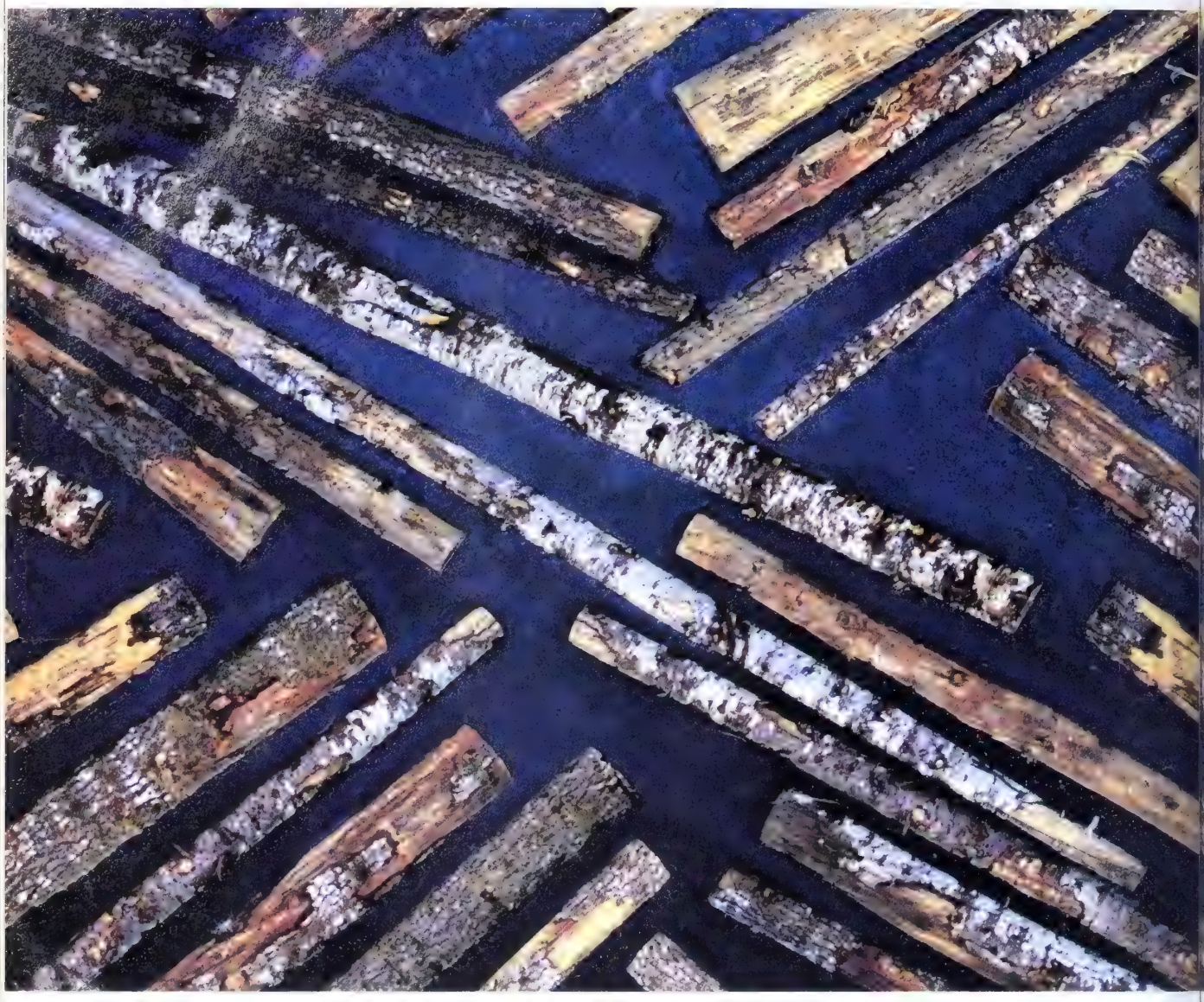
Application backlogs.

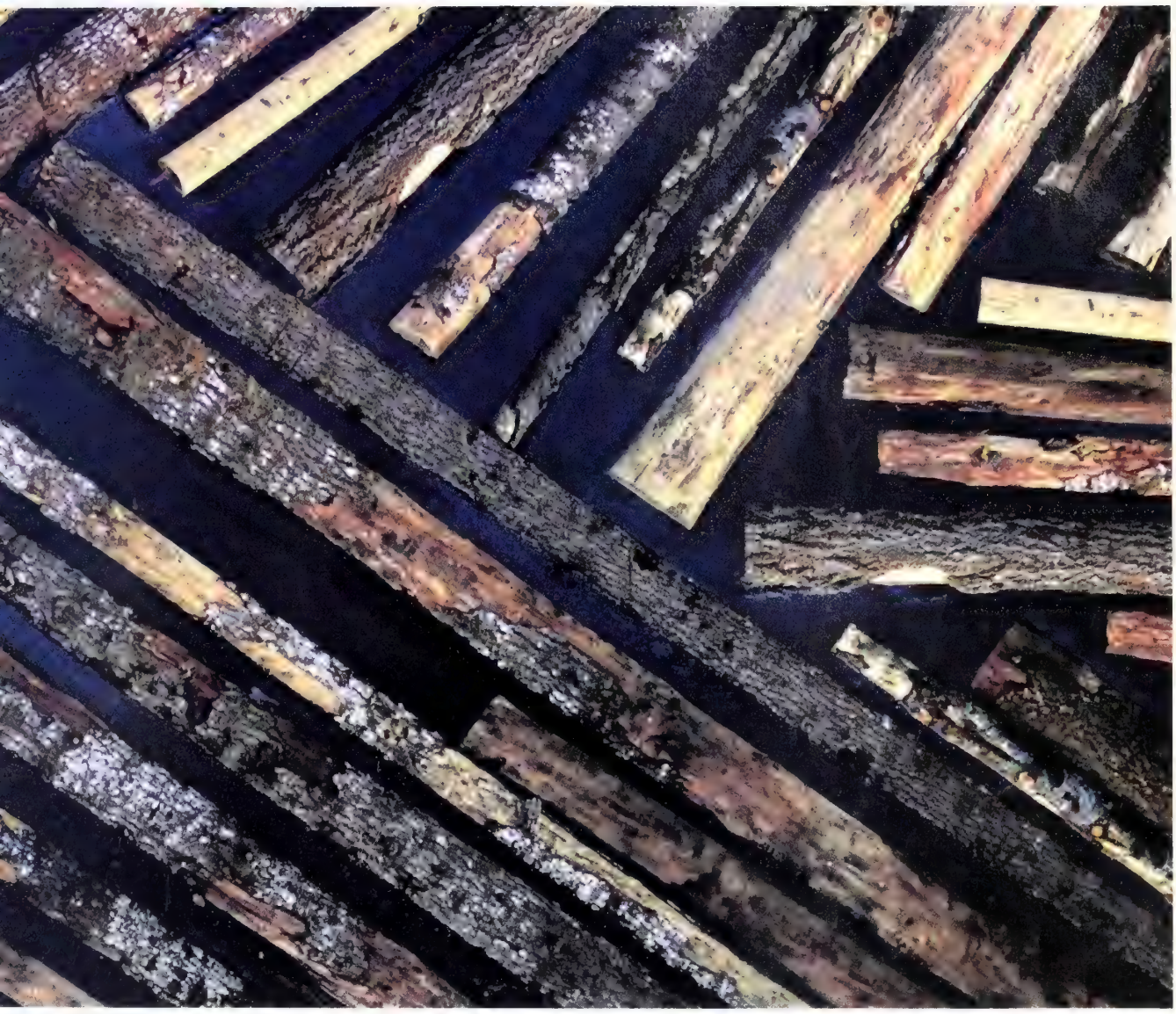


If development's at a sta

In two or three years your company will have
changed, your markets will be different, your compet
tors will be using new tactics, and the applications yo
needed today might be ready.

So it goes with software development. Most
large projects are backed up so long, by the time an a
cation is new, it's old. Worse, it may not even be what
asked for in the first place.

This dilemma is anything but acceptable, so
IBM has launched a major effort to speed things up.
Working with leaders in CASE technology, we're build
ing a new framework called AD/Cycle™ that's giving th
entire development cycle something it never had befo



how fast can the rest of your business go?

n standards for streamlining the process from finish.

AD/Cycle also includes a host of new tools, both M and our business partners: CASE tools for g, analysis and design, languages, generators, ting and maintenance tools, all with a structure rdinating their efforts.

And to help executives and programmers think ike, AD/Cycle offers advanced methods for shar- rmation so that everyone can work on the same gth, so the end product will be right.

Over 60 AD/Cycle products are available today, res of CASE vendors have signed up for AD/Cycle. Which means it's already gaining acceptance as a standard for application development, and much more is on the way.

Companies like Eastman Kodak, Phillips Petroleum, USAA and Continuum are now using AD/Cycle tools with good results. Clearly, the sooner you get started the better, and there's plenty to start with now.

The roots of today's backlogs are many, but the biggest culprits have been a lack of standards and direction—the very ills that AD/Cycle is designed to cure.

For more information about our growing family of AD/Cycle products call 1 800 IBM-CALL, ext. 822.

IBM

Datacomm Commentary

"When it's 'data to go,' we order UDS modems"

— Information Systems Group, Wendy's International

Today's fast food business is also a fast data business. Sales and profit figures, inventory controls, expense reporting, wage and benefit information, tax computations and other essential data must flow quickly and reliably between individual stores and corporate headquarters.

That's why the implementation of Wendy's new corporate-wide datacomm system demanded the utmost in modem reliability. And **that's** why Wendy's chose UDS as their modem supplier.

Wendy's modems of choice are the UDS Sync-Up™ V.32 and Sync-Up 2/V.32. They connect Wendy's remotely sited microcomputers with the corporate mainframe. Collectively they give Wendy's a full-duplex, 9600 bps data link to every company location, no matter how remote. UDS provides maximum reliability, ongoing customer support and a virtually error free communications environment.

If your modem requirements are too critical for compromises, do as Wendy's has done: contact UDS at 800/451-2369 (in Alabama, 205/430-8000); FAX: 205/430-8208.

UDS
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eaders Report

e to delayed rights, such as were in [Gordon] Gould's laser patents, small price to pay so as not to ze the private patent inventor. Our and copyright system were not ved to make creativity rewarding y the multinational companies and n-based inventors.

Arthur R. Eglington
Pottsville, Pa.

Japanese spend more on product velopment than we do, and they oth foreign and the U. S. patent ns strategically.

nging the patent system is no pan- for our product-development ills. really needs changing is the way nance and manage technology de- nent.

Arnold L. Newman, President
Synexus Corp.
Kensington, Md.

D ON THE HUMAN BEDROCK, THE INFRASTRUCTURE

ur suggestion to increase spending n the U. S. infrastructure in "How t a fire under the economy" (Edi-, Nov. 18) has a lot of merit. How- it must not be forgotten that the important part of any country's tructure is its people.

is done wisely, massive spending dges, highways, and other facili- ould probably increase productivi- ome extent. However, if we do not ss the human side of the equation, ill only have built empty monu- to our stupidity. Since there is y an oversupply of empty build- from the S&L debacle, we hardly ny more.

s interesting to note that compa- nvolved in quality improvement re- getting back as much as $6 for $1 invested in training. Why l we not expect that similar poten- es in addressing our problems in tion, crime, health, and poverty? urse, the answers aren't that easy, retending the problems don't exist ives them more time to grow.

s about time for Congress and the ent to understand that the only vay for everyone in the U. S. to more is if we collectively produce We cannot do that with first-class es and third-class people.

Will Kaydos
Charlotte, N. C.

to the Editor should be sent to Readers Business Week, 1221 Avenue of the Ameri- w York, N. Y. 10020. Fax: (212) 512-4464, 12-7960, Intl. 4998204. All letters must in- n address and daytime and evening tele- numbers. We reserve the right to edit letters ity and space.

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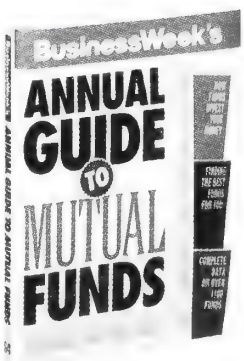

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TAKE TWO ASPIRIN AND READ THIS BOOK

Of the dozens of high-tech, gene-spliced, megabuck, you-name-the-superlative drugs I've ever written about, not one has intrigued me as much as aspirin. Its uses run the gamut from silencing a headache's drumbeat to keeping cut flowers fresh. Aspirin has played a pharmaceutical Zelig, appearing and reappearing in unusual spots: Hippocrates recommended a cousin of aspirin found in willow bark as an herbal tonic. Earlier in this century, the drug was embroiled in Nazi politics. More recently, it has been the subject of fierce marketing battles and captivating scientific puzzles, even emerging in the late 1980s as a purported magic bullet to stave off heart attacks.

All this is a prescription for an offbeat and wonderful book. And all of it is contained within Charles C. Mann and Mark L. Plummer's hefty treatment, *The Aspirin Wars: Money, Medicine, and 100 Years of Rampant Competition*. Unfortunately, upon finishing the book, I felt as if I had just heard my favorite joke told by somebody whose delivery was sadly lacking.

From Nazi connections to mysterious curative powers, it's all here. The only thing missing is a good editor

Many of *The Aspirin Wars'* problem could have been corrected by sor pretty simple editing. The fundamenta are all there: Readers who finish t book will come away with a good sen of the strange history and ongoi mysteries of this 100-year-old nostru Plummer and Mann conducted exhau tive research and covered a lot of h torical, business, and scientific groun They also pull off some good, accessib writing about the chemistry and acti of aspirin.

The trouble is, reading the book co er-to-cover is like trying to swallow o of its namesake tablets without wate First off, the introduction just doesn do its job. The scene-setting story of 1988 meeting among medicine compa executives and Food & Drug Admin tration officials to discuss as rin advertising is drawn t narrowly to foreshadow t many interesting aspects the drug that lie ahead.

From this off-putting ope er, the reader plunges in about 150 pages of history, b ginning around the time t drug first appeared on t shelves of Germany's Fri

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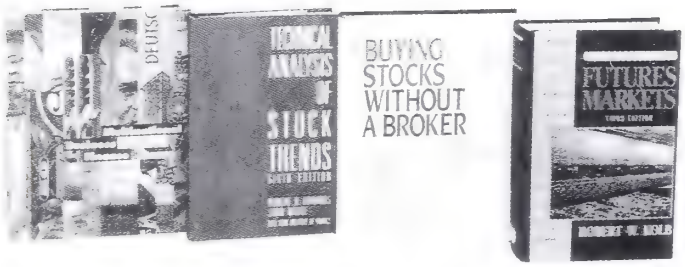

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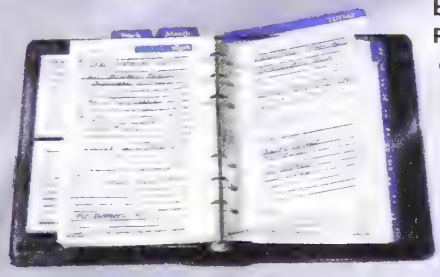

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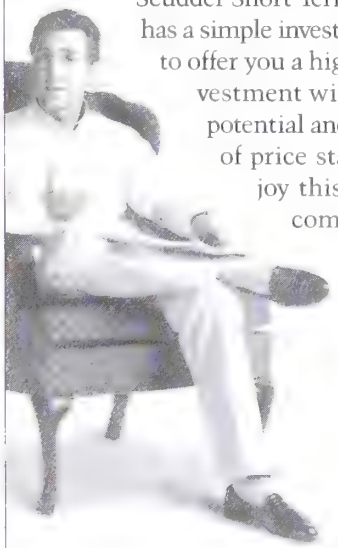

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Books

drich Bayer & Co. in 1897. Much of its narrative is quite interesting, including the account of the slippery slope on which executives of I. G. Farben, the giant conglomerate that by World War II had become the parent of Bayer found themselves after they gave their support to the growing Nazi party. Expedient above all, Farben's cowardly executives embraced Hitler in return for his promised support of their business concerns and gradually dropped their resistance to such practices as rooting out and firing Jews. That did not deter them from efforts to hide Aspirin profits from the Nazis through a series of shell games with offshore partners.

Unfortunately, the historical account skips around and bogs down. There is too much detail about negotiations on deals that could have been handled in a page or two. And while some anecdotes are cluttered with extraneous information that the authors apparently couldn't bear to leave out, others reach out for additional detail.

Mann and Plummer reveal, for example, that aspirin languished on Bayer shelves for more than a year while the company pushed another promising compound, trade-named Heroin. There's a prick-up-your-ears detail. But while the authors note that the repeat business on Heroin "was incredible" and a few other odd facts (the drug was so named because it made users feel heroic"), they too quickly straighten the wheel and push on, leaving you wondering, for example, how long Heroin was used as a cough remedy before its addictive properties became known.

Similarly, Plummer and Mann recitation that 23 Farben executives were tried as war criminals at Nuremberg then add only that 10 were acquitted. They don't reveal what the charges were or what happened to the majority who were convicted.

The patient reader is rewarded midway through when Mann and Plummer focus on the marketing battles that began long after aspirin's patent lapsed. "Buy Mejoral for a Virgin," crowed Sterling Product Inc.'s sales reps as they traveled through Latin America in the 1940s, armed with posters of the Virgin Mary to be given to anyone buying a three-pack of Mejoral aspirin. Mann and Plummer also delight with recounting the rise of Tylenol and the television advertising slugfests that followed. They drive home a chilling reality: Over-the-counter drug marketing resembles the strategy dope peddlers use. The spoils go to those who position their potions as magic solutions to the user's problems.

he authors hit just the right wry when describing the flip-flops of rin marketers in the late 1980s. For rs, aspirin lost ground to Tylenol in $2 billion over-the-counter analge- market, largely because Tylenol keters convinced consumers that as- was bad for the stomach (in fact, a small percentage of aspirin tak- report having stomach problems). a result, many aspirin makers tried ownplay the aspirin content of their relievers. But after the heart ck studies came out in 1988, the g became so hot, note Mann and mmer, that "the unthinkable hap- ed: Anacin admitted it was made n aspirin."

he most important insight in *The irin Wars* is that the drug's cheap e, unpatented status, and tumultu- regulatory history mean that much s great potential is and will remain pped. There's no way manufactur- will invest the millions necessary to low-margin aspirin for such ills as ientia, problems of pregnancy, ke, even AIDS—all diseases for h it shows promise. That doesn't ent the drug from being studied: weeks ago, scientists from the

Repeat business on a urn-of-the-century Bayer ough remedy trade-named Heroin 'was incredible'

erican Cancer Society announced aspirin even appears to help pre- colon cancer, for reasons they do yet understand. But there is e chance that an aspirin manufac- r will invest the massive resources could be required to explain how why.

oreover, federal regulators who e grown weary of policing aggres- drug companies seem to be throw- out the baby with the bathwater: n though many scientists believe as many as 100,000 heart attacks ually could be prevented if middle- d men consumed more aspirin, the has impeded efforts to promote the g for that use.

nfortunately, readers must wait un- he epilogue for these aspects of the y to be clarified. It's a shame that editors of *The Aspirin Wars* didn't ly just a spoonful of sugar to help medicine go down.

BY JOAN O'C. HAMILTON

ilton, who covers biotech and pharma- icals, wrote a 1988 cover story, "Miracle g," on aspirin.

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A TRUSTBUSTER WHO SAW THE LIGHT

BY GARY S. BECKER

As a young economist, Nobel prize winner George Stigler wanted to take a mallet to monopolies. Years later, he lost faith in regulation, and his changing views had a profound effect on public policy

GARY S. BECKER IS UNIVERSITY PROFESSOR OF ECONOMICS AND SOCIOLOGY AT THE UNIVERSITY OF CHICAGO

The death of George Stigler a few weeks ago at age 80 deprived the world of a still-active, highly creative Nobel prize-winning economist. A leader of the free-market Chicago School, his views and those of his colleagues on antitrust came to be known as the Chicago approach and enormously influenced government policies and court decisions since the early 1980s.

Early in his career, Stigler was a gung-ho activist on antitrust policy, calling for the bust-up of some monopolies and for extensive restrictions on mergers presumed to cut competition. But these positions were radically altered in the 1960s as he became convinced that antitrust enforcers often had misguided agendas. Instead of a single-minded devotion to improving competition, Stigler said, regulators respond to pressures to attack or defend "big" business, to protect small companies, and to appeals from political constituencies.

He began promoting a minimalist antitrust policy that essentially permitted all honest business practices except conspiracies to raise prices and divide markets. The way to prevent monopolistic practices, he believed, is to encourage domestic and foreign competition rather than through detailed regulation of business by the Justice Dept.

But his antitrust work was only one of many contributions to economic theory. He was the first to analyze systematically the unawareness of consumers and workers about wages and prices. His conclusions: Information about the types of jobs available and prices charged by different sellers of goods is not free; it takes time and effort to discover. He contributed to the theory of pricing by cartels such as OPEC and examined how companies adjust production methods to uncertainty about demand. Stigler also wrote about the increasing specialization of workers as the scale of production expands and why nutritional needs could be met on a pittance. The last paper demonstrated that practically all spending on food has little to do with satisfying nutritional requirements and caters instead to desire for variety and taste.

PROBING MIND. Stigler was no ivory-tower theorist who shunned policy and practical issues, although he did turn down several positions in Washington. The evolution of his thinking on antitrust policy shows an open and probing mind that lost confidence in the value of most regulation of economic activity, even when it could improve the economy.

Stigler's changing views on antitrust policy colored his approach to other regulatory agencies. In 1962, he wrote a classic paper with Chicago associate Claire Friedland on state regulation of electric utilities. It asked an a surdly simple question: Do the various st regulatory agencies achieve their intended jective of lowering the cost of electrici After studying the evidence, Stigler and Fri land remarked on their "inability to find a significant effects of the regulation of electri utilities." Their study of the Securities & E change Commission's regulations of new st issues reached a similar conclusion.

Although subsequent research disput some of their findings, most have stood well to close scrutiny. These studies stimul ed a large literature that examined wheth the actual effects of civil rights legislati welfare programs, and countless other la are close to their intended purposes.

Stigler asked a much deeper question: W do various regulations really aim to achie His conclusion: Most agencies are "capture by the companies being regulated, which of are helped at the expense of the public.

LASTING LEGACY. He and his students show that the old Civil Aeronautics Board preve ed the introduction of any new interstate a lines; that trucking regulation raised the c of transporting goods; and that environmen policies often discriminate against small bu nesses and against companies in the Sou western U. S. In essence, Stigler argued t regulations frequently make matters wo by reducing competition.

Stigler's work contributed in a major way the widespread disillusionment with gove ment-centralized direction and regulation economic life. Socialism, central planning, a other goals of the 1940s and 1950s sound good on paper but have not worked out w This is not because of the sophomoric ar ment that "true" socialism and planning ha never been tried, for devastating defects a intrinsic to systems that permit political c siderations to dominate economic ones. T decisive advantage of market systems is t they decentralize power away from the Wa ingtons of the world and toward individ businessmen, workers, and consumers.

George Stigler's lasting contributions to analysis of public regulation and economic t ory were made with a grace, humor, a liv writing style, intellectual honesty, and a g erosity that is rare. Few such intellectual ants come along in any generation. I consi it an enormous privilege to have written s eral articles with him and to number h among my closest friends. The economics p fession, the University of Chicago, and es cially his friends already badly miss this " regulated economist"—the apt title of memoirs.

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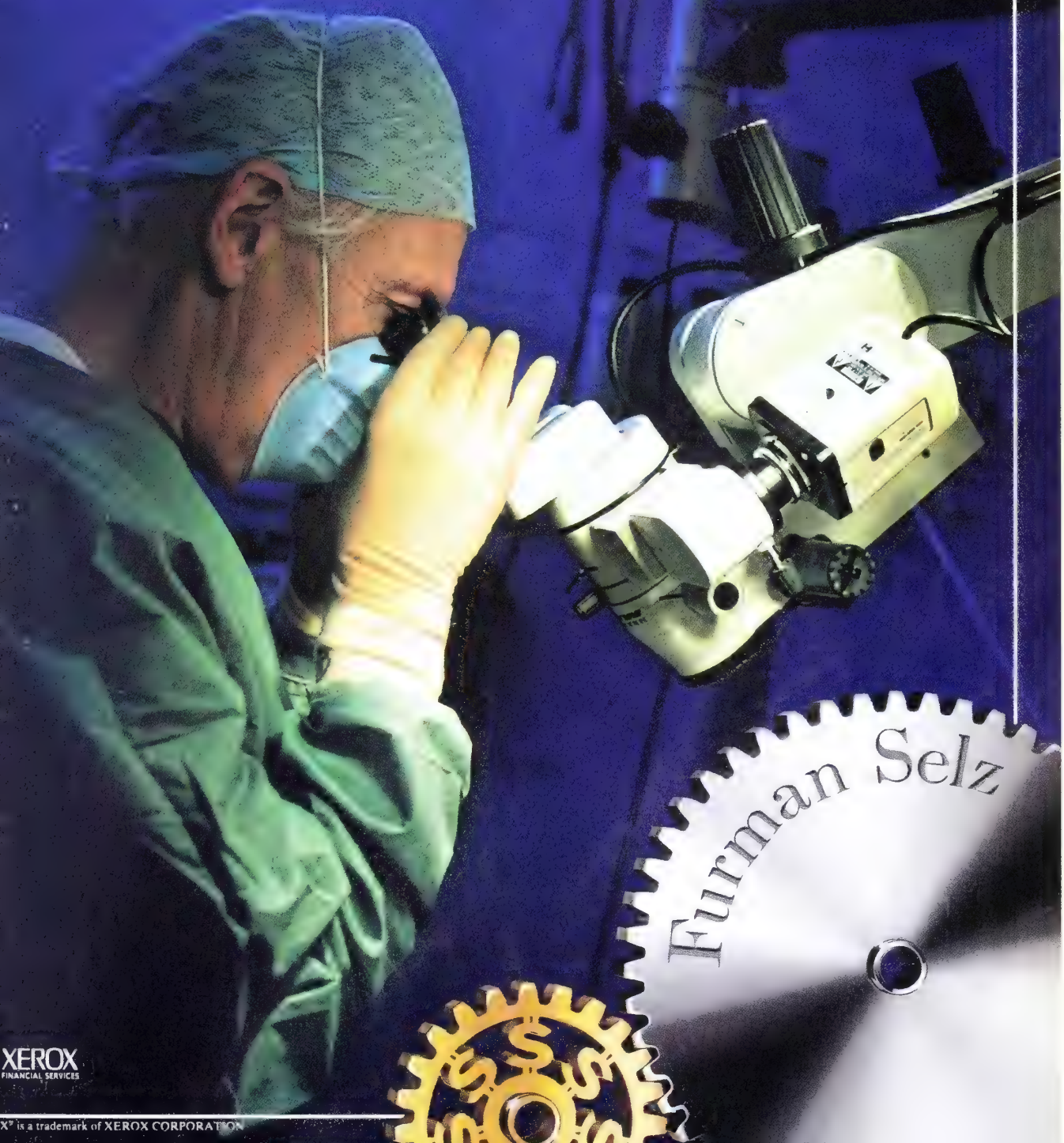

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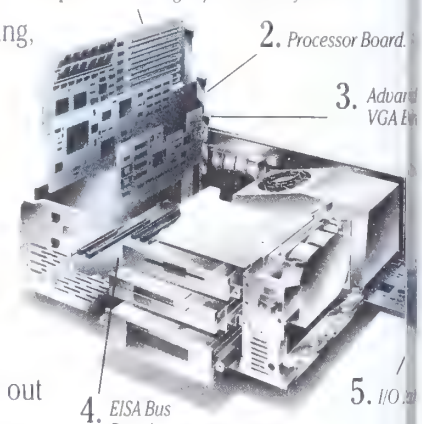

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BY GENE KORETZ

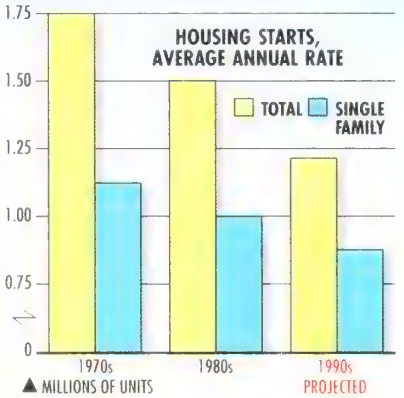
YESTERDAY'S 'BIRTH DEARTH': TOMORROW'S HOUSING BUST?

Can housing play its usual antirecessionary role by providing the driving force of economic recovery? That's the question plaguing a number of economists, who note that housing starts, which normally take off in the depths of a downturn, have been relatively restrained this time around—running in the current quarter only 19% above their cyclically low 915,000 annual pace in the first quarter.

The answer obviously depends on the factors that are inhibiting housing construction and demand. Some observers think that the biggest depressants are the disarray in the thrift and banking sectors and the inability or reluctance of many traditional housing lenders to provide financing to builders and buyers. Others think that consumers are holding back because slowing inflation has pushed up real mortgage rates even as nominal rates on fixed-rate mortgages have moved down. In this view, it's only a matter of time before sharper declines in interest rates spark a relatively strong housing pickup by boosting affordability and consumer spirits.

Economist Leonard Mills of the Federal National Mortgage Assn. isn't so sure, however. He thinks that housing's lackluster recovery may in part reflect a decline in underlying demographic demand resulting from the so-called birth dearth that began in the early 1970s. "We may well be witnessing the initial impact of a significant slowdown in the growth of the adult population in the 1990s," he says.

HOUSING DEMAND WILL BE SLOWING IN THE 1990s



DATA FEDERAL RESERVE BANK OF PHILADELPHIA

In an article in the latest issue of the Federal Reserve Bank of Philadelphia's *Business Review*, Mills projects housing demand in the 1990s. Based on the expected growth in the adult population, he calculates that housing starts in the 1990s should run about 1.21 million units a year, down significantly from their pace in earlier decades (chart).

Looking at the years immediately ahead, Mills predicts that demographic factors will reduce the demand for new housing units in the U. S. by 21% by 1995, with the Northeast and Midwest suffering declines in starts of about 40% and 60%, respectively. The impact, he adds, will shift during the decade from multifamily to single-family construction as the baby-bust generation ages.

To be sure, Mills concedes that cyclical conditions tend to dominate housing activity over the short term. Indeed, because of the recession, housing starts in 1991 are running about 30% below the level his model projects—suggesting that a sharp snapback in housing could still materialize. But Mills notes that actual housing starts during the 1980s exceeded his projections, so the housing stock this year includes about 1 million more units than population factors would seem to warrant.

"The continuing high rate of vacancies, particularly in the multifamily sector," says Mills, "indicates that earlier overbuilding of housing units has still not been offset by the sharp drop in new construction." The upshot, he feels, is likely to be a subdued housing recovery next year, followed by growth that will be constrained by demographic factors through the rest of the decade.

ALCOHOLISM'S DRAIN ON THE ECONOMY MAY BE DEEPER THAN EVER

The economic costs of alcoholism are growing. According to the National Center for Health Statistics, such costs—estimated at about $128 billion in 1986—will hit $150 billion by 1995, assuming drinking patterns remain constant. Although more than half of this is because of lost employment and reduced productivity, the medical bill is also high: Health care costs for untreated alcoholics are double those of nonalcoholics.

Meanwhile, a recent study by the National Council on Compensation Insurance indicates that workers' compensation costs are correlated with alcohol use, with such costs running 33% higher in the five states with the highest per capita consumption than in the five states with the lowest. The NCCI concludes that a 10% drop in alcohol co sumption in 1989 could have reduce workers' comp costs by $2.5 billic through fewer and less severe claims.

THE FACTORY FLOOR IS A GLOOMIER AND DOOMIER PLACE

Manufacturers are singing the blue According to Dun & Bradstre Corp.'s monthly survey of 1,000 man facturers, their optimism fell in Nover ber for the fifth straight month—nearir the recession low it hit in Novembe 1990. D&B reports that manufacture anticipate both a decline in order bac logs in coming months and a drop their finished-goods inventories—su gesting that "there will be virtually r growth in the manufacturing sector f the next few months."

Similarly, a survey of some 250 mi size manufacturers last month by Gra Thornton, a management consultir firm, indicates that three quarters b lieve the U. S. economy is still in rece sion—and nearly half of that group do expect a recovery until mid-1992. Abo the only optimism found in both su veys was expressed by exporters.

CARS ARE GETTING SMALLER—BUT THEY'R ALSO GETTING SAFER

Conventional wisdom argues th smaller cars are less safe than larg cars and that automobile fatality rat will therefore increase if more small ca appear on U. S. highways. But a ne General Accounting Office study d putes such projections.

The study notes that fears about au downsizing derive from research co cerned with "crashworthiness," or t protection that cars of different siz afford their occupants in a collisic While it doesn't dispute such findin the GAO's review of the data on fa traffic accidents indicates that redu tions in auto weight since the mid-197 "have had virtually no effect on to highway fatalities." Indeed, the agen found that fatality rates for all cars ha declined in recent years, with the ra for lighter cars improving the most.

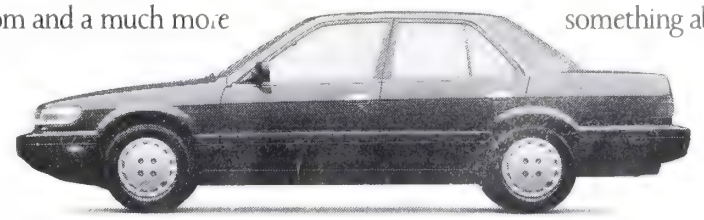
The explanation: Focusing exclusive on crashworthiness neglects benefic safety factors related to weight. Spec ically, the dramatic drop in the numb of heavy cars has reduced the dang such vehicles pose to occupants lighter cars with which they collide.

WE CAN SEE BY YOUR FACE THAT YOU'VE PRICED THE NEW CAMRY.

$17,000 for a Camry LE? Yikes.

What you need is a dose of reality. Like the Nissan® Stanza® XE. It has just about everything you've ever wanted in a family sedan. Like a Value Option Package that includes air conditioning, AM/FM stereo cassette, cruise control and power windows and door locks. More headroom and a much more powerful standard engine than Camry. Traditionally high resale value. And up to $1,000 in factory-to-dealer incentives can help make it yours for under $15,000.* That's up to $2,600** less than you-know-who.

So after you've gotten over the Camry sticker shock, come see Stanza. But first, do something about your hair.



THE NISSAN STANZA. STILL UNDER $15,000.

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*Smart people always read the fine print. And they always wear their seat belts. *M.S.R.P. excluding title, taxes, license and destination charges. Incentive available for a limited time. Dealer participation may affect cost. **Comparison based on Stanza XE with Value Option Package with automatic transmission to Camry LE. Actual price difference without incentive $1,608. Differences in destination charges may affect price comparison.*

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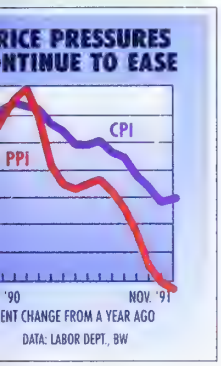
MBER 30, 1991

BY JAMES C. COOPER AND KATHLEEN MADIGAN

HIS NEW YEAR'S BABY WON'T EET THE INFLATION MONSTER

s far as the U. S. economy is concerned, the best thing you can say about 1991 is that it's over. However, recessions usually leave behind one ome legacy: declining inflation. And 1992 should be ifferent.

at's especially true since the economy is hobbling the new year without the ability to generate broad e pressures. Moreover, if forecasters are right about (page 62), the modest recovery they expect will ent inflation from developing any new steam.



The latest data engender few inflation fears. Stores are slashing prices to attract holiday buyers, but sales remain humdrum. Weak demand is causing retail inventories to pile up. The housing recovery is sputtering. Industrial output is losing ground. Operating rates are falling. And capital-spending plans for 1992 are not spread evenly across the economy.

that climate, few businesses are even thinking t raising prices. Indeed, inflation usually improves at least a year after a recovery begins, and it is ming clear that an upturn is not even under way A growing number of economists believe that the -91 recession is turning into the 1990-92 downturn. ven the White House now admits that for all practi- purposes, the recession continues. Federal Reserve rd Chairman Alan Greenspan didn't go quite that far is congressional testimony on Dec. 18, but he said the recovery "clearly has faltered."

's not just the cyclical forces that are driving down tion. The unwinding of the debt-driven boom of the s is a structural depressant on prices. Consumer and ness debt had grown at a double-digit pace during h of the past decade, but now the annual growth has plummeted to less than 3%—the slowest pace in e than four decades. This massive deleveraging is ting a strong deflationary force on the economy.

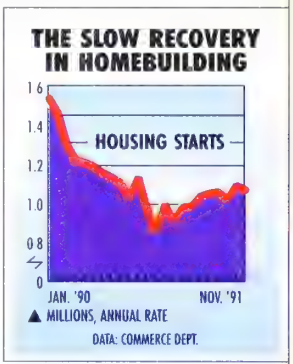
HERE E THE OLIDAY LES?

All the price gauges suggest that inflation is under control and likely to remain so. The consumer price index rose 0.4% in November, and the core CPI, which elimi- s the volatility in food and energy prices, rose only . The producer price index for the month looked e as well. The trends in the annual inflation rate for the CPI and the PPI are clearly down (chart).

Demand is simply too weak to keep inflation at the consumer level from dropping further. Retail sales rose only 0.3% in November—0.2% excluding autos. In fact, nonauto retail buying is down 0.2% from a year ago, the worst performance in the 24-year history of the data.

Moreover, the government revised retail sales in both September and October downward. If December sales are as bad as feared, consumer spending in the fourth quarter will be a drag on economic growth that might even result in a decline in real gross domestic product.

Housing typically helps consumer demand by boosting spending on home-related goods. However, the current upturn in homebuilding is too weak to provide much support (chart). Housing starts fell 2.1% in November, to an annual rate of 1.07 million. That was the second decline in the past three months, and although starts hit bottom 10 months ago, they remain 5.7% below their year-ago level. And 1991 will likely end up as the worst year for homebuilding in the postwar era.



Another downward pressure on prices of consumer goods is excessive retail inventories. Despite cautious ordering by retailers, weak sales caused their stockpiles to balloon by 1.3% in September and 1.2% in October, the largest two-month increase in three years.

An acute sign of trouble shows up in nondurable goods, where the ratio of inventories to sales in November jumped to one of the highest levels in the past 17 years. Getting rid of those stocks amid soft demand will require deep discounting. Bulging retail inventories also mean less ordering, and that darkens the outlook for the industrial sector this winter.

DEMAND FOR SUPPLIES IS WEAK

Another reason for the bright inflation outlook at the retail level is that price hikes at the producer level are small or nonexistent. It's easy to see why: Industrial companies can't raise prices with demand so weak.

In November, the producer price index for finished goods increased just 0.2%. Excluding food and energy, the gain in the PPI was only 0.3%. Because of the sharp drop in energy prices after the end of the gulf war, finished-goods prices stand a bit below their level of a year ago. The PPI without food and energy is up 3.1%, a slower pace than the 3.7% clip of November, 1991.

Inflation further back in the production process is

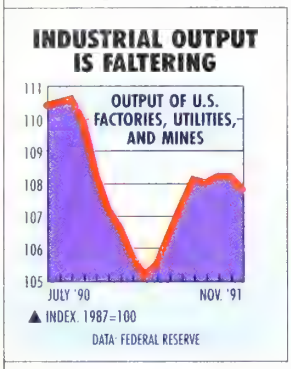
ERIC HOFFMANN/BW

even tamer. Excluding food and energy, wholesale prices of materials and supplies rose 0.1% in November and are 1% below their year-ago levels. Crude-material costs are some 9% lower than a year ago. And commodity prices in mid-December fell to a four-year low.

DETROIT CAN'T GET IN GEAR

Upward pressures on producer prices are unlikely to build until manufacturers are firmly on the road to recovery. Right now, the outlook isn't good. The industrial sector is on the brink of a new downturn.

Output at the nation's factories, utilities, and mines fell by 0.4% in the month, despite a 0.9% jump in utility use as extremely cold weather in some regions raised energy demand. After surging in the spring, output hasn't gained any ground since July (chart).



Factory output alone fell by 0.5% in November, but a strike-related decline in industrial equipment and a drop in auto output accounted for much of the weakness. Both drags on output may stick around for a while, but the fall in auto production is especially worrisome because it reflects the sharp falloff in car sales.

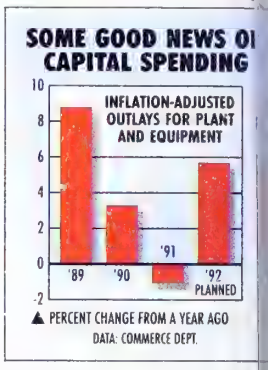
Detroit made cars at an annual rate of only 5.7 million in November, down from 5.9 million in October and 6 million in September. But even that sluggish pace may be getting ahead of car sales. After new domestically made autos sold at an annual rate of just 6.2 million in November, car buying dropped to a feeble 5.4 million rate in early December.

But it isn't just auto makers who are in trouble. Production of home-related consumer goods has been flat since July, nondurable goods are weak, and even excluding the strike, industrial-equipment output is falling.

Little wonder, then, that operating rates have bee falling steadily since midyear. The capacity-utilizatic rate for all industry dipped to 79.1% in November, fro 79.6% in October. The factory rate was down to 78% from October's 78.6%.

The slackness in capacity is a big plus for the inflatic outlook. Manufacturers can't raise prices and risk losin the new orders that will keep their production lines bus

But the decline in operating rates also means that manufacturers have little reason to invest in new plants and equipment. The Commerce Dept.'s latest survey on spending plans, done in October and November, shows that real capital outlays in 1992 will increase by a respectable 5.7%, after they fell 1.1% in 1991 (chart).



Manufacturers, however, plan no gain in 1992 investment following a 4.3% drop i spending in 1991. All the increase in capital spendin next year will be made by nonmanufacturing industrie especially airlines and commercial services.

In the past two years, businesses started out mor optimistic on spending plans only to scale back thei capital budgets as the year progressed. That may be th case in 1992, especially if profits do not perk up.

However, whatever the increase in budgets, spendin is likely to go for new equipment, because of the ove supply of commercial buildings. That should help capita goods makers, but not until the second half of the yea

Stronger economic growth is undoubtedly first on ev eryone's wish list for 1992. However, lower inflation— and the downward pressure it brings on interest rates— does give businesses and consumers something to lool forward to as they close the books on a year they ma well prefer to forget.

THE WEEK AHEAD

PERSONAL INCOME

Monday, Dec. 23, 10 a.m.
Personal income likely rose by 0.2% in November, the same gain as in October, say economists surveyed by McGraw-Hill Inc.'s MMS International. Consumer spending probably increased 0.3% in November, after a 0.3% fall in October.

DURABLE GOODS ORDERS

Tuesday, Dec. 24, 8:30 a.m.
Durable goods orders likely fell by 1% in November, after rising 3% in October.

LEADING INDICATORS

Tuesday, Dec. 31, 8:30 a.m.
The government's composite index of leading indicators probably fell by about 0.5% in November. That's suggested by falling stock prices, rising unemployment claims, and a steep drop in consumer expectations for the month. In October, the index rose a slight 0.1%.

NEW SINGLE-FAMILY HOME SALES

Tuesday, Dec. 31, 10 a.m.
New houses probably sold at an annual rate of about 500,000 in November, little changed from the disappointing 513,000 pace in October.

CONSTRUCTION SPENDING

Thursday, Jan. 2, 10 a.m.
Outlays for building projects likely dropped by at least 1% in November, as bad weather in the Midwest held back construction activity. In October, spending increased by 1%, led by a 3.8% gai in government outlays.

NAPM SURVEY

Thursday, Jan. 2, 10 a.m.
The National Association of Purchasing Management's index of industrial activi ty probably fell below the 50% mark i December. That's a sign the factory sec tor is back in recession. The NAPM inde stood at 50.1% in November.

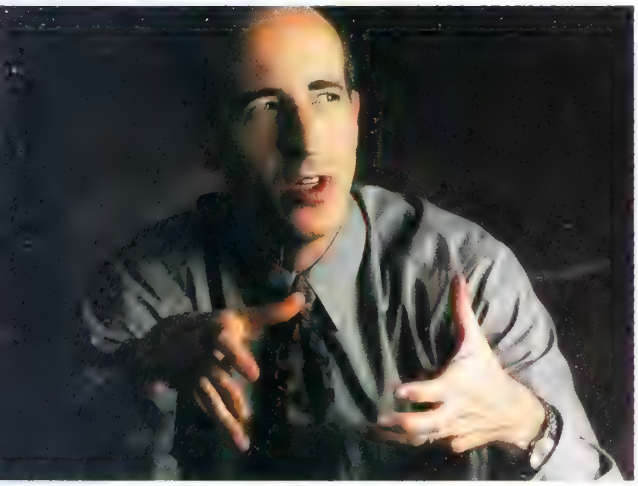
FACTORY INVENTORIES

Friday, Jan. 3, 10 a.m.
Manufacturers likely added little to thei inventories in November. That's sug gested by the cutbacks in production Factory stock levels were flat in Octobe but had risen 0.4% in September.

For a second opinion on Windows, ask Baxter Healthcare Corp.

"The suite of applications for Windows is very rich."

"Our people are doing much better work. Better looking. Better crafted."



"As far as I was concerned, it was obvious: Windows is where it's going."

"It's just made it a lot easier to do a lot of things."

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DECEMBER 30, 199

WHEN CALIFORNIA SNEEZES...

THE STATE'S WIDENING RECESSION IS HAVING AN IMPACT EVERYWHERE ELSE

If only some Hollywood megalomaniac could snap his fingers and bark: "Get me a rewrite of this script!"

But there's nothing celluloid about California's recession. Consider the lumber mills of the Pacific Northwest, which used to count on California's booming building sector to pull them out of the dumps. "Now, it's a different world," moans Dixie Tibbets, sales manager of Medford Corp.'s lumber division in Medford, Ore. With California construction down 25%, orders have dried up. This Christmas, Medford is closing plants for an unusual two-week hiatus.

Retailers, steelmakers, banks, and defense subcontractors from Utah to New York are paying the price as California's economy heads into a recession deeper and longer than almost anyone had forecast. And California's horizons are gloomier than ever. On Dec. 12, San Francisco-based Wells Fargo & Co. announced that it will set aside $700 million for loan losses because of persistently weak California real estate. The next day, Standard & Poor's Corp. lowered its rating on California's public debt to AA from AAA, citing the state's yawning $4 billion budget gap (page 35).

OUT OF THE CHIPS. Big deal, you say? Banks are a bummer nationwide—what about California's high-techies? True, Silicon Valley hasn't been hit as hard as other parts of the Golden State. But after a gee-whiz-what-a-blast decade of double-digit sales growth, Silicon Valley is girding itself for single-digit territory. Still growing, but get this: Silicon Valley has lost 6,900, or 3.7%, of its electronics jobs since October, 1990 (page 34)

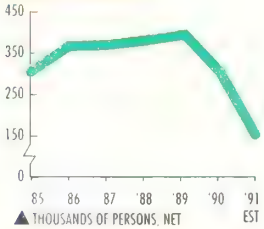
Plenty of folks have been waiting fo cocky California to get its comeuppance Too bad, because even far-away Penn sylvanians are finding out the hard wa how their own livelihood is linked to th Golden State. Its 30 million resident make up a huge market. Contributin more than 13% of the nation's output California's economy is tightly interwo ven with the rest of the nation's in way no other state can match (map).

And right now, as America gropes fo a way to stage an economic rebound, stubbornly sluggish California figure most certainly to hold it back. Say Mark Zandi, an economist at Regior al Financial Associates Inc.: "It i very difficult to come up with a na tional economic recovery without Cal

THE NATION OF CALIFORNIA

'LEGENDS,' AN RTC-OWNED EYESORE IN LANCASTER, MAY BE BURNED DOWN IN *LETHAL WEAPON III*

MIGRATION TO CALIFORNIA



ECONOMIC GROWTH

PERSONAL INCOME, ANNUAL PERCENTAGE CHANGE 1980-90

CALIFORNIA 8.4%

U.S. 7.5%

1990-92*

CALIFORNIA 4.2%

U.S. 4.2%

*ESTIMATE

DATA: DRI McGRAW HILL INC., REGIONAL FINANCIAL ASSOCIATES INC., STATISTICAL ABSTRACT OF THE U.S., BUREAU OF ECONOMIC ANALYSIS, CB COMMERCIAL REAL ESTATE GROUP INC.; CENTER FOR CONTINUING STUDY OF THE CALIFORNIA ECONOMY, FISCAL SURVEY OF THE STATES, BW

JOBS

CUMULATIVE NONFARM EMPLOYMENT GAINS, ANNUAL PERCENTAGE CHANGE

1980-90

CALIFORNIA 2.7%

U.S. 2.0%

1990-92*

CALIFORNIA 0.2%

U.S. 0.0%

STATE TAX NET INCREASE

FISCAL 1992

CALIFORNIA $5.7 BILLION

U.S. TOTAL $15.0 BILLION

MANY CALIFORNIAS

Los Angeles public schools teach in English, Spanish, Armenian, Korean, Cantonese, Tagalog, Russian, and Japanese

CALIFORNIA'S OUT

PERCEN

rnia providing some of the strength." A generation of Californians has ised their kids and sent them to Berke- y since they've seen such bad times. his year's loss of 414,000 jobs is the verest on a percentage basis since 45. With six quarters of economic con- action already, the state is heading for longest downturn since the Great De- ession. It has gotten so bad that even visers hired to help the jobless find ork are being laid off. Says Susan rne, an outplacement counselor who st month lost her job at Lee Hecht arrison in Los Angeles: "The recession so deep that even companies using tplacement firms are cutting back." avid G. Hensley, chief of the economic recasting unit at the University of Cal- rnia, Los Angeles, doesn't see a turn- ound before late 1992.

Already, workers in other parts of the untry are suffering. Pittsburgh com- ter salesman Barry Silverman was d off in November when his employer, XT Computer Inc. in Redwood City, lif., cut staff by 5%. He's searching r a new job but says: "It looks pretty re." In Seattle, homeowners in the top r of the market are finding their prop- ty values have tumbled 25% since ring, 1990. The flood of "equity ban- ts"—people who sold their homes in lifornia at sky-high prices, then ught mansions in the lower-priced Se- tle market—has slowed to a trickle.

At the heart of California's woes is new construction. During the 1980s, a stream of lumber, steel, and other materials fueled the building binge. But housing starts this year are down 51% since 1989, and commercial real estate is even worse off. Vacancies in downtown Los Angeles, already 19%, could soar next year, says economist Zandi. So orders for lumber, steel, wallboard, and ceiling tile have declined sharply. Geneva Steel in Provo, Utah, which ships one-quarter of its output to California, saw profits slide 54%, to $17.5 million, in the fiscal year ended in September. The story is the same for companies that once filled new California homes and offices with carpeting, furniture, and appliances.

> A $4 billion budget gap, 7.4% unemployment, real estate crippled . . . The list of woes goes on and on

Nowhere do things look as bleak as at California's arms makers. While many of the state's industries will rebound one day, thousands of defense jobs are gone for good. The expected cancellation of the B-2 bomber alone would eliminate half of Northrop Corp.'s revenues, and its subcontractors around the country also stand to lose work. LTV Corp. in Dallas is set to lose $6.4 billion of B-2 work, forcing it to lay off 3,000 workers, fully one-third of its aircraft employees. By its own estimates, LTV would then cancel subcontracts with scores of smaller companies, costing the regional economy some $13 billion in the 1990s.

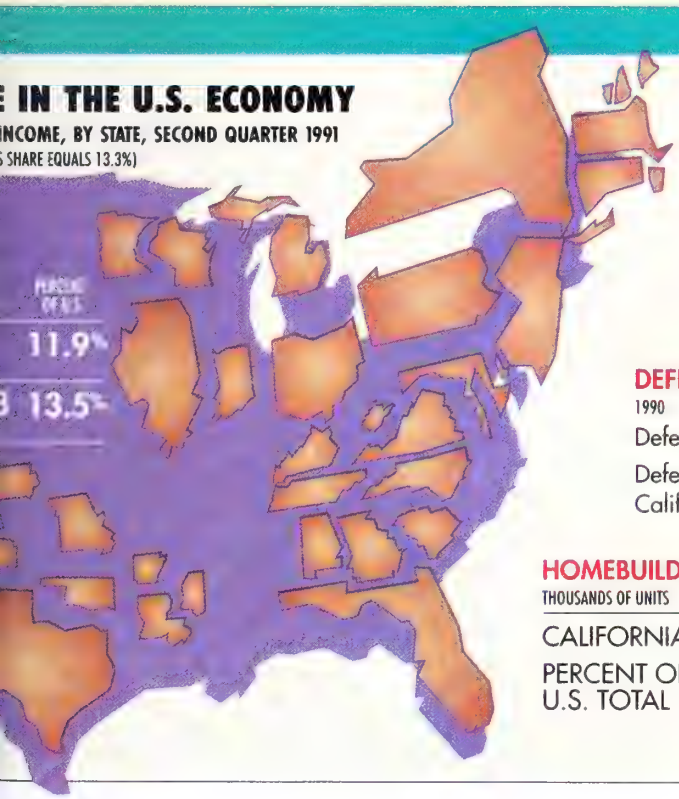
MEGABANK CUTS. In banking, too, California faces a grave erosion of its employment base. The proposed merger of Bank of America with Security Pacific Corp., for example, is expected to cut 10,000 to 15,000 jobs in California and other Western states. It's widely expected that another megabank in California, First Interstate Bancorp, also eventually will merge, resulting in more layoffs.

With all these job losses, it's no wonder that California consumers are so tight with their dollars. And retail chains that expanded in the lucrative California market during the late '80s, such as R. H. Macy & Co., are suffering. All department store sales in California fell 1.1% in the first nine months of 1991, while rising 3.7% nationally. Macy's knew it had trouble with its operations back East, but California's retail crunch caught it off guard.

All this is threatening California's treasured place in the American psyche as the land of milk and honey. Traffic, congestion, smog, and soaring home prices dimmed some of the glow of the

E IN THE U.S. ECONOMY

INCOME, BY STATE, SECOND QUARTER 1991
S SHARE EQUALS 13.3%)



OFFICE VACANCIES

METROPOLITAN AREA	1990	1991	1992*
U.S.	19.5%	19.3%	17.2%
LOS ANGELES	17.8%	20.1%	16.0%
SAN DIEGO	21.0%	22.7%	19.4%
SAN FRANCISCO	13.5%	14.7%	13.2%
SAN JOSE	12.7%	12.8%	13.0%

DEFENSE INDUSTRY

1990

Defense manufacturing employment: 345,900

Defense workers as a share of California's total manufacturing work force: 16.2%

HOMEBUILDING

THOUSANDS OF UNITS	1987	1988	1989	1990	1991*
CALIFORNIA	256.3	243.7	232.8	170.4	114.8
PERCENT OF U.S. TOTAL	15.7%	16.4%	16.9%	14.2%	11.5%

DEATH VALLEY DAYS FOR THE TECHIES

When Ellis Goldberg was laid off last May as marketing director of Biomation Corp., a Silicon Valley electronic test-equipment maker, he figured he could quickly find work in the job-rich region. He figured wrong. Six months, 30 interviews, and 1,000 résumés later, he was forced to settle for a sales job with a tiny software company that paid 30% less than his old $70,000-a-year job. At least he had work.

Now, that's gone, too. On a singularly unlucky Friday, Dec. 13, Goldberg was laid off again—this time, after less than two months. Fortunately, savings, a severance check, and his wife's part-time job will likely tide his family through without severe disruption. But the double whammy has shaken his confidence. "It makes me question my own worthiness," says Goldberg.

The recession is dealing workers in the one-time economic powerhouse a brutal lesson in job-hunting. While Silicon Valley's 5.7% jobless rate is still four percentage points lower than in some months in past recessions, there's no doubt new jobs are scarce. In the 12 months ended Oct. 31, the region lost 14,800 jobs—6,900 in electronics—the state Employment Development Dept. says.

BLINDSIDED. And it's not just assembly workers who are bearing the brunt: Unemployment benefits to professionals, technicians, and managers combined jumped 19% in the past six months, the largest rise among 10 occupational categories.

Goldberg, 46, never saw the layoff coming. After moving from New York City to the San Francisco Bay area in 1973, armed with an electrical-engineering degree, he found sales and marketing jobs with electronics companies. He landed at Biomation 11 years ago. When its Japanese distributor, Toyo Corp., bought the company last year, Goldberg didn't worry. "I knew they had lifetime employment in Japan," he says. But when hard times hit this year, he discovered not all Japanese work concepts extend to U. S. outposts.

To find work, he amassed a data base of 1,450 names. Using a program that allows him to tailor his résumé easily and to automate addressing, Goldberg mailed some 1,000 résumés. But at many interviews, managers had a foot-high stack of résumés on their desks. "I'd tell myself every morning that I'm going to find a job," he says. "Then it doesn't come. It's pretty deflating."

GOLDBERG: 1,000 RESUMES

STAYING HOME. It's all the worse on the second go-round. "It seems like we're back to square one, but this time we have fewer financial resources," says his wife, Sharon, a teacher's aide. She's mulling a full-time teaching job, but they're scarce. Meanwhile, the couple and their two teenage girls are taking no vacations and on rare nights out stick to Denny's coffee shops.

A self-described East Village hippie in the 1960s, Goldberg now finds himself missing the chance to wear a tie and jacket. He reminisces about the days when he and his salespeople would close a deal, return to their car, and scream with joy over the conquest. "I'd like to create work for the people in the factory," he says.

Now, he must create work for himself. So it's back to the unemployment line near his home in Danville, northeast of the Valley, and back to want ads, résumés, and endless lunches with employed friends who might, perchance, have leads. For Goldberg and many others like him in the Valley, finding work is a full-time job.

By Robert D. Hof in San Francisco

California dream during the past decad Now, California's unemployment rate, 7.4% in November, outstrips the nation average of 6.8% .

Job seekers no longer flock to Calif nia. In fact, some are leaving. Video e tor David W. McKee, 26, departed S Francisco for Atlanta in October. "I hoping for a better lifestyle and mo opportunity," he says. Colorado pe some 60% of its projected $39 milli school budget shortfall to California moving into the state.

STIGMATIZED. Just doing business in C ifornia is becoming a stigma. Because expects more sluggishness in Californi where Minneapolis-based Dayton-Hu son Corp. gets one-third of its sale First Manhattan Co. analyst Thoma Tashjian cut his 1992 earnings foreca for the retailer. "We've never expe enced it this bad before," says Walt Rossi, chairman of Dayton-Hudson Mervyn's chain of moderately priced d partment stores, which rings up abo 60% of its sales in California. "It will very difficult at least as far out as can see."

Has the darkest hour settled upon C ifornians? Banking analyst George Salem of Prudential Securities In warns: "The worst is ahead of them He says the state is in the early stag of a crisis that could rival those suffer in New England and Texas. He's gloom er than the consensus opinion that Ca fornia is diversified enough to rebou eventually. But each month of stagn tion spells more trouble for Californ banks, as well as such others as C bank and Chase Manhattan Corp., whi have lent $2.6 billion and $1 billion, spectively, to California developers.

Not even Hollywood dreamers are i mune. Lavish film budgets in the l 1980s and a lackluster box office ha driven scores of movie producers out business and cut production for tho that remain. The bad news has reach Wilmington, N. C., where seven movi including *Billy Bathgate* and *Ramblin Rose*, were shot last year. This year, feature films were made in Wilmingto

Hollywood at least has found one w to cash in on California's woes. For t climax of *Lethal Weapon III*, Warn Bros. Inc. wants to torch the Legen housing development in Lancaste Calif., which was abandoned, half-fi ished, 18 months ago. That's fine wi city officials, who are eager to get rid an eyesore. Once again, the rest of t country can watch a piece of Californ go up in smoke.

By Kathleen Kerwin in Los Angel with Christopher Farrell in New Yo Dori Jones Yang in Seattle, Walec Konrad in Atlanta, and bureau reports

IVISTS ERUPTED WHEN GOVERNOR PETE WILSON VETOED A GAY-RIGHTS BILL IN OCTOBER

OLITICAL AFTERSHOCKS F AN ECONOMIC EARTHQUAKE

chastened California is being torn apart in battles over social services

rom its earliest days, California has relished big jobs. The state was in its infancy when 10,000 workers—many hem from the first wave of Chinese immigrants—built a 127-mile railroad over through the Sierra Nevada. Later, as Golden State kept drawing hordes m across the continent and oceans, it n't flinch at providing a premier system roads, aqueducts a Roman emperor uld envy, munificent social programs, a standard-setting system of higher cation. If there were bumps on that 10-e California freeway, they soon were oothed by a relentlessly booming econo- that grew to rival all but a handful of largest nations on earth.

Now, the shock absorbers on America's gest state are getting squishy. With its nomy sputtering and environ-ntal and other regulations ding employers fleeing to oth- states, maintenance of even h bedrock programs as educa-, medical care, and welfare pear beyond California's sp. Just five months after sing a $14.3 billion budget def-—by far the largest ever pro-ed by a state government—ramento is looking at a fresh rtfall of at least $4 billion re. "California has always had s crazy mentality that it could ord anything it needed," ffs Joseph F. Alibrandi, chairman of Los Angeles-based electronics maker Whittaker Corp.

Alibrandi is heading an industry-backed drive for a ballot initiative to give parents vouchers worth about $2,500 a year to send their kids to private schools. California's schools are indeed a mess, with the $4,826 allotted annually to each student putting the state 31st in the nation and $335 below the national average. Just 10 years ago, California ranked 22nd.

Schools are just one example of a chastened California (table). On Dec. 9, Governor Pete Wilson proposed a constitutional amendment to slash by up to 25% the state's $2.8 billion a year in welfare payments to poor mothers. California's welfare payments now average $663 a month, fourth-highest in the nation. The more than 130,000 recipients coming each year from lower-paying states have helped swell California's rolls to 1.9 million. That's nearly 17% of all U. S. recipients for a state with 12% of the population. Today, the state says, welfare pays for one in every three babies born in the state.

A moderate Republican who often is mentioned as a 1996 Presidential candidate, Wilson last summer dismayed conservatives by compromising on tax hikes with the Democrat-controlled legislature. Since then, he has swerved right. In October, he vetoed a gay-rights bill, prompting a series of violent protests. Now, with his scheme to slash welfare, he may be highlighting deeper divisions in the state. Wilson's welfare initiative, Assembly Speaker Willie L. Brown said, is "the biggest political cop-out since Chamberlain gave up Czechoslovakia to Hitler."

Sacramento has ever been split by partisan strife, but the state's political system seems less and less capable of sorting out problems. Democrats cut a budget deal with Wilson last summer. But this time around, Assemblyman John L. Burton says: "We're not going to save Pete Wilson's ass." Democrat Gray Davis, the state's controller, recently refused to institute a 5% pay cut for state workers ordered by Wilson. The governor had to go to court to win the $300 million in savings.

'REVENGE.' The yawning budget deficit—and looming political gridlock—prompted Standard & Poor's Corp. to drop California's bond rating to AA from AAA on Dec. 13. "Don't think for a minute that this is a mere Friday-the-13th stroke of bad luck," Wilson responded. "We were warned."

Indeed, the numbers are daunting. Over the past decade, the state has watched a growing number of 45- to 64-year-olds leave the state, taking their relatively high incomes and tax bills with them. Replacing them, the state says, is a larger number of younger, and frequently poor, transplants from the U. S. and abroad in need of a wide variety of social services.

That's one reason why Wilson has proposed limiting newcomers' welfare payments. "It's the revenge of the middle class," says Sherry Bebitch Jeffe, a political analyst at Claremont Graduate School. She likens Wilson's attack on social programs to David Duke's ill-fated Louisiana gubernatorial bid. "They're saying the same things about the welfare state," says Jeffe, "but Pete Wilson has strong numbers and none of Duke's craziness." For Californians, so used to an ever-expanding vision of the good life for almost everybody and an easy benevolence toward everyone else, that is one shocking realization.

By Ronald Grover in Los Angeles

CALIFORNIA ANXIETY

Results of a Los Angeles Times poll taken May 21 and Dec. 10 (in May, there were 1,679 respondents, in December, 1,629)

	MAY	DECEMBER
Is California on the right track?	YES 31% NO 59%	YES 18% NO 69%
What are the most important issues facing California?	EDUCATION 16% CRIME 11% DROUGHT 10%	ECONOMY 18% UNEMPLOYMENT 16% CRIME 9%

DATA LOS ANGELES TIMES

Commentary/by Paul Magnusson

BUSH'S ASIAN GRAND TOUR LOOKS MORE LIKE A ROAD SHOW

President Bush had the germ of a good idea when he decided to take along 21 savvy U. S. executives when he travels to Tokyo in January. By hauling business leaders along on a state visit, a practice favored by European heads of government, Bush got the symbolism right. For the first time, the White House is elevating trade issues to the exalted levels that used to be occupied by, say, pleas to Tokyo to patrol Japanese sea lanes against Soviet submarines. At nearly every photo opportunity during the four-day visit, which begins in early January, a stern-faced American CEO will bear silent testimony to President Bush's newfound resolve on trade.

The danger is that the executives may be little more than pinstriped props in the trade drama. Without any legitimate function on the trip, warns House Energy & Commerce Committee Chairman John D. Dingell (D-Mich.), the CEOs could wind up standing behind Bush like so many "potted palms."

REAL SUBSTANCE. And although the White House is struggling to add meaningful activities to the schedule, it won't be easy: Between tennis matches with Emperor Akihito and palace tours, there's little time on the President's schedule for any substantive talks.

Nor will scheduled meetings with Prime Minister Kiichi Miyazawa be of the head-knocking variety. Miyazawa's two-month-old government is already in the public-opinion basement, with approval ratings of just 38%. Whether the Prime Minister could even deliver on a promise to open markets is uncertain. Miyazawa's attempt to authorize participation of Japanese troops in international peacekeeping forces collapsed in acrimony after a near-riot on the Diet floor. New Japanese leaders are supposed to show their ability to get along with American Presidents. But "if the U. S. presses too much, the Miyazawa administration could collapse," warns Takeshi Sasaki, a University of Tokyo political scientist.

Mindful of Bush's own flagging approval ratings, his top economic advisers hope to recast trade policy as a domestic initiative. Upon his return from the four-nation trip—to include Singapore, Korea, and Australia—Bush's Jan. 28 State of the Union message will paint the trip, and negotiations to form a North American Free-Trade Zone, as part of a new domestic agenda to create jobs and investment in the stagnant U. S. economy.

But in dealing with Japan, the Administration seems devoid of new ideas. It might do well to listen to some of the executives on the backup plane—including James D. Robinson III of American Express, David M. Roderick, formerly of USX, and Maurice R. Greenberg of American International Group. In 1989, these three executives were among the authors of a 122-page report that recommended a radical new approach to Tokyo: Determine what the U. S. share of the Japanese market would be if there were no import barriers, then negotiate "successful outcomes" for different categories of competitive U. S. products.

That idea fell flat at the White House. But Japan's refusal to buy high-tech American goods—even when no comparable product is yet available from Japanese suppliers—has kept out U. S.-made cellular telephones, specialty metals, and fiber optics. In 1990, imports of telecommunications gear accounted for 3% of the Japanese market. J. P. Reilly, chief of Tenneco Automotive and a participant in the trip, complains: "Unless there's free trade on a global basis and all markets are equally open, the system doesn't work." Rather than adopt the "results-oriented" strategy, the Administration fell back on the old ploy of pleading for Japanese concessions to help the White House keep the Democratic Congress from passing protectionist legislation.

SMALL CHANGE. That program has had only limited success in opening the huge Japanese market. While a lower dollar and a crash program in quality control and cost-cutting have helped spur U. S. exports and led to a trade surplus with Europe, Japan barely noticed. Manufactured imports as a share of gross domestic product in Japan hardly changed during the 1980s and stood at just 3.7% last year. By contrast, manufactured imports accounted for 7% of American GDP and 16.6% of Germany's.

Despite isolated successes in eliciting Japanese vows to buy U. S. supercomputers, wood products, and satellites, Japan's trade surplus with the U. S. still runs at $40 billion a year. That's down slightly, but largely because the recession in the U. S. is reducing imports. Meanwhile, Japan's overall trade surplus with the world is up 46% for the first 11 months of the year. "Yet the President and his immediate advisers still think the Invisible Hand will rescue us," says American University economist Stephen D. Cohen, author of *Cowboys and Samurai*, a book critical of U. S. trade policy.

U. S. Trade Representative Carla A. Hills, who will not be traveling to Japan with the President, insists that the CEO road show is "not a gimmick." If so, Bush might dust off his copy of the report and invite some of the CEOs to get together for some old-fashioned brainstorming.

> Bush and his advisers have no new ideas on Japan trade. They 'still think the Invisible Hand will rescue us'

MPEL'S MOVES WILL SAVE $5 BILLION A YEAR BY 1995—BUT WON'T HELP RIGHT AWAY

M CAN'T DOWNSHIFT AST ENOUGH

nt closings, layoffs, no bonuses—and losses are still a certainty

ew economic enterprises ever assembled have been as large as General Motors Corp. Even after years osing market share in the car busis and cutting back workers and facs, the company still employs rough-00,000 workers in the U. S. alone. Its ories have the capacity to turn out 7 ion cars and light trucks, nearly half ales in what the industry would con-r an acceptable year. So in some se, it's only fitting that when Corpo-America is chopping back almost y, GM would announce the biggest of all: Over the next three or four rs, some 60,000 of its workers will their jobs. What is more stunning is it might not be enough.

hairman Robert C. Stempel didn't ce words in announcing the cutbacks Dec. 18. "We're not going to sit here if things get worse," he said. The h was hardly comforting. Even by tting plants and laying off workers, is cutting out only about 1.25 million s of capacity. By some estimates of North American auto market, where ign competitors have steadily added y factories, total excess capacity unts to nearly 6 million vehicles.

erhaps that is why, for all the tough and tough action, the visible reac-outside GM was remarkably low-key. company's stock fell a scant ⅛, to 4. And even though the restructuring was rushed into effect in an effort to head off a possible downgrading of GM's debt by the rating agencies, there initially seemed no assurance that Stempel's move had worked. Scott Sprinzen, vice-president for corporate finance at Standard & Poor's Corp., says the cutbacks were anticipated and do nothing to reduce GM's high debt load. He said the rating agency's evalution continues.

DRASTIC MEASURES. GM had been preparing for Stempel's day of reckoning for some time. As U. S. car sales crept slowly out of the ditch this summer, Stempel crossed his fingers in hopes they wouldn't slide right back if the economic recovery faltered. But just in case, over the next few months, he and top lieutenants pieced together a drastic cost-cutting strategy for GM's struggling North American operations.

So, when Stempel went on the company's in-house television network on Dec. 18, he told employees GM will close six more assembly plants across the country over the next four years, on top of four closings announced in February. Four engine factories and 11 parts plants will also be shuttered. Some 54,000 of GM's 304,000 U. S. blue-collar workers will lose their jobs through early retirement, attrition, and, perhaps, layoffs by 1995. So will an additional 11,000 white-collar employees, on top of 15,000 announced earlier this year.

Stempel didn't slight executives. He canceled all bonuses for executives and salaried workers next year. He also slashed the capital-spending budget by $1.1 billion, or 7.7%, over the next two years, and put "noncore" businesses on the block, possibly including some parts operations. GM estimates that the cuts will reduce overall operating costs by $2 billion annually in 1992, widening to a $5 billion annual saving by 1995. "We must make fundamental changes in the way General Motors does business," said Stempel.

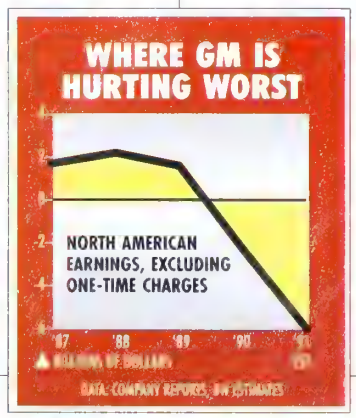
Most of the financial benefits of the plant closings and job reductions won't come until 1993 and beyond. If the car market stays in its current slump, analysts say, GM's North American operation could lose $6 billion next year on top of the $6 billion it lost last year (chart).

'OFF THE CHART.' There is also almost sure to be an angry reaction from unions, whose cooperation GM needs to help improve its productivity and the quality of its vehicles. The United Auto Workers has already rebuffed GM's repeated requests to renegotiate the rich three-year contract agreed to in 1990, under which GM agreed to pay union members whether they work or not. Now, before GM has even announced which plants will get the ax, UAW Vice-President Stephen P. Yokich vowed to fight the closings. "That's no way to run a company," he said.

With less drastic cost-cutting in the past, GM hasn't shrunk fast enough to remain competitive. While crosstown rivals Chrysler Corp. and Ford Motor Co. are in the red, too, they're much leaner. Chrysler figures GM loses an average of $1,500 more than Chrysler for every car and truck it sells, and $1,650 more than Ford. "They're off the chart, they're so bad," says a top Chrysler executive.

There are still hurdles to implementing Stempel's plan. So far, he has only identified 2 of the 21 factories to get the ax—both of them V-6 engine plants in Lansing, Mich. And it's unclear how he will get around technicalities in GM's UAW contract, such as one that requires GM to hire one replacement for every two employees lost to attrition. Simply put, Stempel may have to get used to delivering bad news.

By David Woodruff, with James B. Treece, in Detroit



PHOTOGRAPH BY MICHAEL L. ABRAMSON. CHART BY ALBERTO MENA BW

ENTERTAINMENT

THIS COULD BE POLYGRAM'S BIG BREAK

An Orion Pictures deal would complement its entertainment strategy

Remember when Japanese consumer-electronics giants Sony Corp. and Matsushita Electrical Industrial Co. shelled out more than $10 billion combined during a Hollywood spending spree? Get ready for a sequel, this time courtesy of Europe's Philips. Executives in the Netherlands and Hollywood say that PolyGram, Philips' 80%-owned entertainment arm, is negotiating to take a major stake in Orion Pictures Corp., the star-crossed producer that filed for bankruptcy on Dec. 11. If the deal comes off, it will be a big step in PolyGram Chief Executive Alain Lévy's plan to make PolyGram a major general entertainment company, along the lines of Time Warner Inc. and Sony.

PolyGram and Philips have already been doing cautious shopping in the U. S. In 1989, PolyGram paid $732 million to add rock and pop labels Island Records Inc. and A&M Records Inc. to its lineup of a dozen recording companies. In recent months, it has agreed to pay $140 million for a 30% stake in superstar producer-composer Andrew Lloyd Webber's Really Useful Group. It also committed to spend at least $200 million over the next three years to boost the output of films from its three small independent producers. Meanwhile, Philips agreed in November to spend $66 million on either a 4% stake in the Blockbuster Entertainment Corp. video-rental chain or in a new joint venture in Europe.

Those deals may be just a preview of coming attractions. A PolyGram deal for Orion is far from certain, given the complexity of satisfying restless banks and bondholders. Billionaire John W. Kluge, who invested $300 million in the company and owns a 70% stake, has refused to invest more. So Hollywood bankers say Orion is seeking some $150 million from PolyGram—in return for control of the studio that has turned out such hits as *Dances with Wolves*, *Platoon*, and *The Silence of the Lambs*. PolyGram would also get a piece of video and television rights to Orion's 750 films and TV shows.

MADONNA'S POPULAR *TRUTH OR DARE* WAS PUT OUT BY PROPAGANDA, A POLYGRAM UNIT

French-born Lévy, 45, a Wharton MBA who became CEO on Jan 1, 1991, won't talk about a potential Orion deal. But a Philips executive says Orion "could fit in perfectly" with its emerging entertainment strategy. Philips hopes to offset lower consumer electronics margins by getting a grip on music and movie "software" used by the hardware it makes, such as Magnavox TVs and VCRs.

Philips is no star-struck latecomer to Hollywood deals. In 1989, PolyGram considered buying MGM/United Artists, say a Philips executive, but "we were scared of the different cultures—you can't control those Hollywood guys. Now, if Orion comes along on a smaller scale, maybe we should take the risk."

The "R" word seems to have been much on PolyGram's mind as it has moved into the business. PolyGram's three producers—Propaganda Films, Working Title Films Ltd, and A&M's film unit—have turned out only a few well-known efforts, such as Madonna's *Truth or Dare* and a collection of David Lynch productions including *Twin Peaks* and *Wild at Heart*. Films will contribute no more than 1% of PolyGram's estimated 1991 revenues of $3.5 billion.

Now PolyGram appears ready for a bigger splash in movies. In mid-January Lévy is dispatching Michael Kuhn, a PolyGram senior vice-president, to Hollywood. A pioneer in music videos, Kuhn will oversee the U. S. film interests. He'll also consider making small investments in up to 10 other production companies around the world and will work on a major U. S. distribution deal.

TOUGH TRYOUT. Lévy will work more closely with Philips from now on. In September, Philips appointed him to its group management board. With a host of new hardware coming out, Philips will want to make sure customers have an enticing entertainment library to choose from. Among other products, Philips is developing compact-disk videos, high-definition TV, and compact-disk interactive—a new medium offering graphics, still photos, video images, sound, and text. Philips also has interests in European cable and pay-per-view TV. "The strategy is sensible," says Mark Beilby, an analyst at London's S. G. Warburg & Co. "The question is execution."

Making PolyGram a Hollywood star may be tough. Philips' entertainment effort is already running up losses. The company has poured more than $200 million into Super Club, a troubled European and U. S video chain. And Orion has some $5 million in debt.

With its rivals betting big on entertainment software, Philips is under pressure to move along. But can it break into the movies with fewer pitfalls than others have had?

By Richard A. Melcher in London, with Ronald Grover in Los Angeles, and Jonathan B. Levine in Paris

POLYGRAM'S PROGRESS IN THE MOVIES

AUGUST, 1991	Pays $140 million for a 30% stake, plus an option on the remaining 70%, in composer Andrew Lloyd Webber's Really Useful Holdings theatrical, film, and music company
SEPTEMBER	Announces deal with Motown Record Co. to distribute its records in the U.S.
NOVEMBER	Announces plans to spend $200 million over three years to buy control of two independent film companies, Propaganda and Working Title, and to finance at least eight medium-budget movies a year. Also unveils plans to distribute Motown disks globally, a deal now subject to court approval
DECEMBER	Talks with Orion Pictures, which is in Chapter 11 bankruptcy protection, about acquiring parts of the Hollywood studio

DATA: COMPANY REPORTS, BW

VICTOR POSNER FF HIS LEASH?

ree watchdogs say the DWG irman is still abusing his power

o hear disgruntled shareholders tell it, DWG Corp. Chairman Victor Posner has some bad habits. ng them: paying outsized salaries bonuses to himself and his family e sticking the company with bills for personal expenses. Some shareholdthought they had finally reined him hanks to a settlement agreed to by ner in August, 1990, and approved by . District Judge Thomas D. Lambros ebruary, 1991. Posner agreed to let judge name three board members to itor the chairman's performance and ove his and his family's compensa- The question now before a federal e is whether those three watchdogs, old E. Kelley, Daniel R. McCarthy, Richard M. Kerger, have any bite. ecording to court papers obtained by NESS WEEK, Posner, who owns 47% Miami-based DWG, still appears to t the public company as his private dom. The papers, filed by the watch- directors, who are attorneys in the west, state that Posner and his son, en, in 1991 collected more than $3 on that belongs to DWG. The money paid by other Posner-controlled panies that owe DWG tens of millions ollars.

here's much more in the watchdogs' rt, filed to bolster their argument Posner may be breaching the settle- t. It alleges that Posner directed subsidiaries to pay more than $5.5 on in rent directly to a company ed by a family trust, rather than e DWG control rent payments. And papers say that Posner, who was wed to collect no more than $3.5 mil- in 1991 compensation, has paid him- far more by funneling cash to his nds and relatives and billing the com- y for such personal luxuries as a ho- suite, a yacht, and a limousine.

ILY MATTERS. Posner, through his yers, says he is complying with the lement. And, privately, his associates there's little Lambros can do to af- the way Posner runs DWG. The ge has suggested in his Cleveland rtroom that he may suspend Posner hairman or freeze his DWG holdings l the company's books are audited. Posner's camp says the judge can't that. "It's a tempest in a teapot," s an associate. "There's no way mbros] can enjoin Posner from voting his shares. It's a lot of wind."

LAMBROS HAS HINTED HE MIGHT SUSPEND POSNER AS CHAIRMAN

Lambros, of course, believes otherwise. And Posner and his lawyers have to be concerned, since the jurist is clearly no fan of DWG management. "It doesn't make any difference whether or not you are the dominant shareholder," said the judge in a Dec. 10 hearing. "It does not allow plundering. [Posner] just takes and takes and takes, hundreds of thousands, millions of dollars, under the auspices of 'salary.' "

Posner is pulling down that high pay for running a lackluster company. Operating profits in the latest six months, ended Oct. 31, hit $35 million on $605 million in revenues, up from $32 million on revenues of $598 million a year earlier. The most recent results turned into a $7.7 million loss, though, after deductions for interest and bad debts, some from affiliates. The market has all but given up on DWG, which owns a diverse stable of assets ranging from RC Cola to textile plants (table). DWG stock closed on Dec. 18 at 3¼, down from a high of 11 in early 1991.

NO DEBATE. The source of DWG's problems, say affidavits sworn by the watchdogs, is easy to identify: self-interested actions on the part of Posner. The three directors have tried for months to confront the chairman with their findings, with little luck. In November, they presented Posner with a highly critical report, signed also by two longtime Posner directors. The document included 12 resolutions. Among them: DWG units were to stop payments to Posner and family members; payments were to be made only through DWG; and Posner and his son were to return the salaries paid by DWG affiliates, since those companies owe DWG big bucks.

The company scheduled a Nov. 11 board meeting to discuss the report, with Posner in attendance. But five minutes after the meeting came to order, Melvin Colvin, Posner's former brother-in-law, moved to adjourn. Posner declared that there would be no debate, and the motion passed by an 8-5 vote. Says a Posner associate: "Whoever's got the votes, wins. He's got the votes."

The dissident directors, however, have Judge Lambros' attention. They won't comment on the sealed report, but one director, McCarthy, says: "We have been appointed by the court to handle this job, and we are doing the best we can." What Posner's lawyers are arguing is that there is no wrongdoing to correct.

It's not certain how Lambros will rule, but DWG shareholders may decide Posner's fate at a Dec. 27 annual meeting. Says Irv Cameon, a Miami investor who owns 40,000 shares: "We're trying to depose the king." The success of that venture is uncertain, as well. What is clear, though, is that Victor Posner's old habits die hard.

By Gail DeGeorge in Miami

DWG: PROFITABLE AT THE CORE

Fiscal 1991, ended April Business segment		Revenues	Operating profit
		Millions	
GRANITEVILLE	Textiles	$414.17	$12.4
NATIONAL PROPANE		150.34	14.0
ARBY'S		181.29	16.8
RC COLA		138.02	30.8
OTHER	Insurance, utility service	360.00	–7.0
NET LOSS*			–17.0

*After corporate overhead, interest, and tax expenses

DATA: COMPANY REPORTS

BRUCE ZAKE

SPORTS BUSINESS

BASEBALL MAY BE ABOUT TO GET CREAMED

Megabuck contracts and falling TV revenues could slam profits

Many baseball fans nearly fell out of the bleachers when the New York Mets signed slugger Bobby Bonilla away from the Pittsburgh Pirates for $29 million over five years. The surprise wasn't just the size of the package, which makes the Bronx native the best-paid athlete in team sports; Bonilla's bonanza could signal the end of the fat years for Major League Baseball profits. With salaries shooting up over the past two seasons and with the outlook for the game's lush broadcast revenues growing bleaker, some of the league's 26 owners could become the ultimate casualties—if the bidding wars continue at their current pace.

The early estimates show that salaries may eat up an unprecedented 42% of total league revenues this year (chart). Payrolls jumped 20% in 1990, and more than 40% last season, to an average salary of $851,000 a year. And that's without the $280 million in damages the owners must shell out, after arbitrators ruled last year that they had colluded to hold down player salaries in the mid-1980s. Before the rulings, the owners had set aside only $100 million of that money.

NO CEILING. Rising payrolls have taken on added importance because of the $600 million in write-offs that CBS Inc. has taken on its sports contracts—caused by ratings that were lower than expected. Although the $1 billion baseball deal runs through 1994, Commissioner Francis T. "Fay" Vincent Jr. is warning that the next one could drop by as much as 50%. "The jump in salaries points out the inherent flaws in the system," says Charles P. O'Connor, the league's general counsel, who negotiated its 1990 labor pact with the Major League Baseball Players Assn.

Ball clubs have been struggling to control player pay for more than a decade. After failing to win restrictions in bargaining, owners decided in 1986 to restrain their bidding when free agents came onto the market. The idea worked wonders, and by 1988 salaries accounted for only 31% of revenues.

Unfortunately, the tactic also violated the league's labor agreement, as arbitrators decided last year. Now, clubs must pay players the $280 million that the arbitrators found to be the amount salaries would have risen without the collusion. And worse, the clubs again are unable to hold down bidding for free agents. The result: soaring pay. When the collusion damages are thrown in, salaries may surpass 43% of league revenues this year—substantially above the precollusion peak of 39% reached in 1983.

That's no big deal to clubs such as the Mets. Large home markets and lucrative cable-TV contracts help to swell its revenues to more than $100 million a year. But smaller-market clubs pull in less than half that. They rely heavily on the $14 million a year each team gets from the national TV deal with CBS and ESPN. Whack $4 million to $5 million out of that figure, as Vincent suggests may happen in 1994, and some of the small-market clubs could be squeezed out of the market for top players.

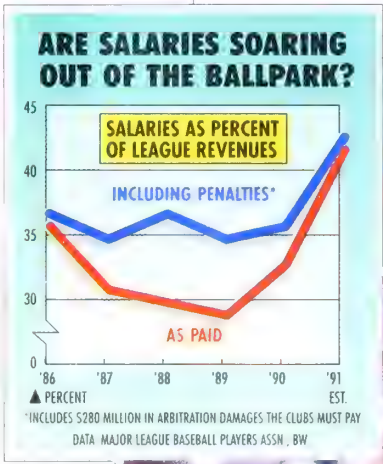
PROFIT SHARING. Just look at the payroll discrepancies among clubs. The teams with the smallest payrolls for players this year spent about as much as they got from TV: $11.5 million for Houston and $13.4 million for Cleveland. The two biggest spenders dished out more than three times that much: $39 million for Oakland and $35 million for Los Angeles. "I don't think any club is in serious trouble yet," says Gary R. Roberts, who was a lawyer for the National Football League (NFL) before joining Tulane University's law school. "But it's not far off down the road when some of the small-market ones will start losing money."

What's the solution? Owners like the National Basketball Assn.'s method: cap what each club may spend on salaries. That also would guarantee to spend a set proportion of their revenues on pay. The concept has worked well for basketball, even though the players recently sued the NBA for allegedly hiding some revenues.

Players don't think much of the smaller salary hikes that would bring. Instead, they suggest that rich clubs share local revenues with the poor ones, as the NFL does. "If there's really a problem with small-market clubs, why don't the clubs solve it instead of asking us to?" asks Lauren Rich, a union lawyer.

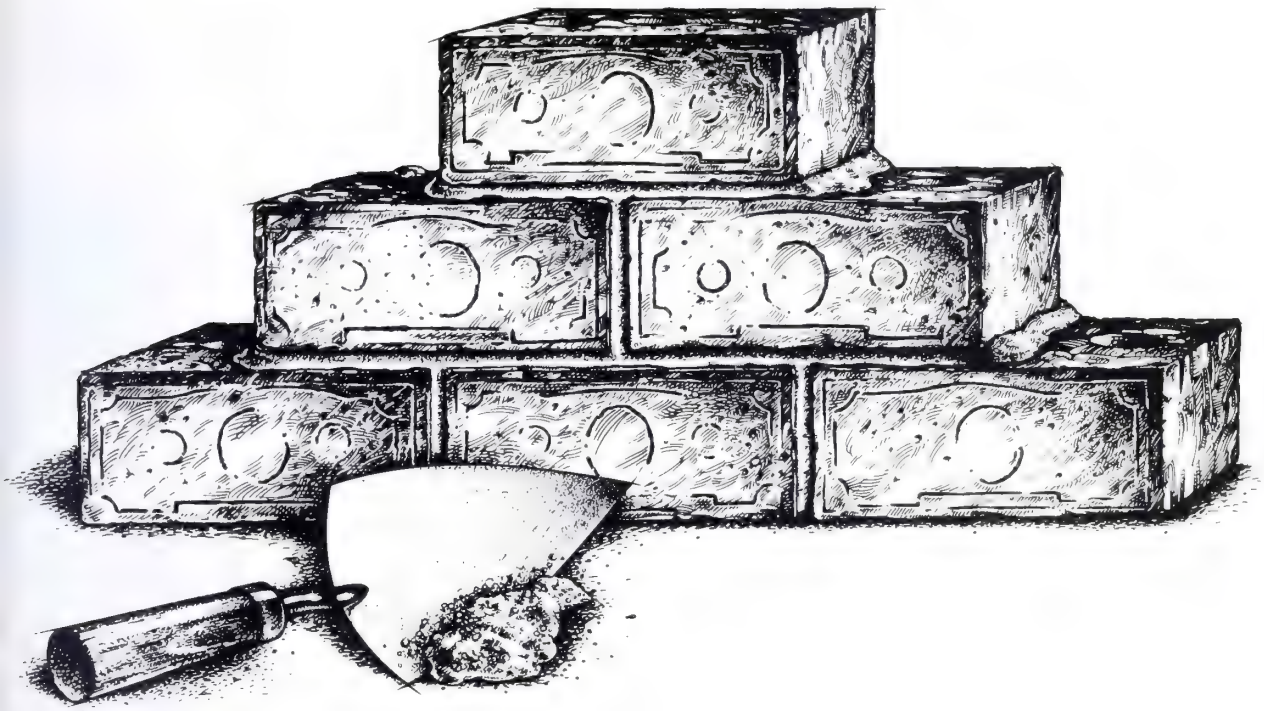
One compromise is some combination of a salary cap and revenue sharing. During last year's labor talks, the two sides set up a committee to study baseball's problems. It should finish its next summer. That still gives the league and the union time to come up with something before the TV contracts expire. But if salaries continue to climb at the current pace, any solution may be as painful to ticket buyers as to the owners and players.

By Aaron Bernstein in New York



BONILLA: PLAYER PAY JUMPED MORE THAN 40% LAST SEASON

VAN KAMPEN MERRITT INSURED MUNICIPALS INCOME TRUST



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on Series for small a dog-eat-dog world.

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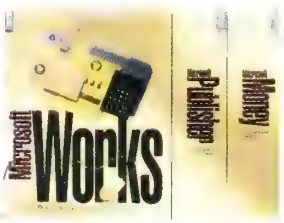

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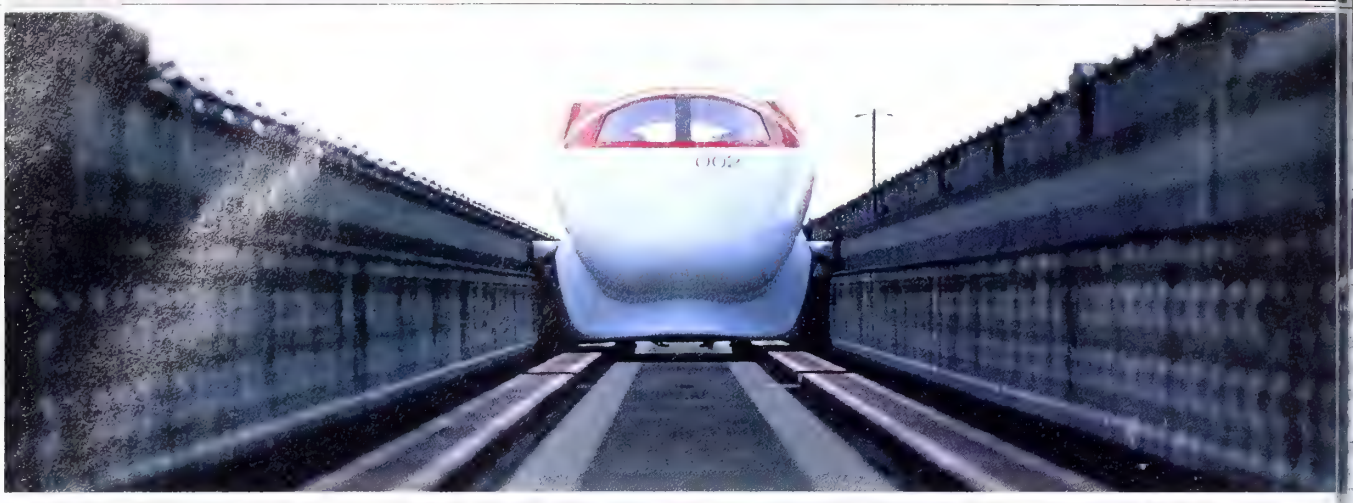


A JAPANESE PROTOTYPE MAGLEV TRAIN CRASHED ON ONE TEST AND LATER WAS DESTROYED WHEN ITS TIRES CAUGHT FIRE DURING A RUN

WILL MAGNETIC LEVITATION EVER GET OFF THE GROUND?

Even with federal R&D funds, the rail technology has a murky future

It had all the earmarks of a major breakthrough. For years, Washington had spent only piddling sums for studies of a futuristic, superhigh-speed transit technology known as magnetic levitation, or maglev. But buried in the fine print of the $151 billion transportation bill President Bush signed on Dec. 18 is $725 million over six years for development and production of the nation's first maglev prototype. Backers say that the funding will help the U. S. leapfrog past Japanese and German technology. "It's a matter of pride," declares James Taylor, vice-president of Orlando-based Maglev Transit Inc., a high-speed rail company specializing in public transit projects.

But like so much that happens in the wee hours before Congress leaves town, the measure may not be all that it seems. Immense financial, environmental, and political obstacles remain in the path of 300-mph levitated trains. Skeptics believe the whole effort is just another pork-barrel part of the transportation bill, an antirecession jobs program dressed up in high-tech hype. "It's a chance to put some defense contractors back to work," snipes a government transportation specialist.

'BUCK ROGERS STUFF.' But to many lawmakers—and even to White House officials who usually balk at anything that smells of industrial policy—federal funding of trains riding on powerful magnetic fields has a certain attraction. Tokyo and Berlin have already spent $1 billion each on the trains and have demonstrated their advantages. Clickety-clack steel wheels are replaced with a single guideway the trains glide above, lifted by magnetic fields. Maglev trains are far faster than existing trains. The German prototype relies on controlled magnetic attraction and repulsion to raise the train off the rail, while the Japanese version uses magnets to repel the train. "It's science-fiction, Buck Rogers kind of stuff," notes Roy E. Smith, president of Resco Engineering, an Ontario railroad supplier.

It's also sometimes Keystone Kops kind of stuff. Last year, a Japanese prototype built by Hitachi Ltd. slammed into a wall, and in November, it was destroyed when rubber tires it runs on at low speeds caught fire and burned.

American efforts haven't even gotten that far. U. S. scientists developed the original maglev concept 20 years ago, then dropped it when the government focused on more conventional transit. More recently, plans to build a $600 million, 13½-mile line between Orlando International Airport and Walt Disney Co.'s Epcot Center using Germany's system were dealt a blow when Disney decided that the terminus should be about a mile from the nearest hotel. That would mean a bus or car trip that would take almost as long as the 6½-minute maglev jaunt.

Plans for a $5 billion, 250-mile line between Anaheim, Calif., and Las Vegas, which also would use the German system, are in deeper trouble. Becht Group Inc., the prime contractor, pull out of the project in November when couldn't raise $200 million from outsi investors for the necessary preparato work. And California Governor Pete W son vetoed funding for the Californi Nevada Super Speed Train Comm sion—just as Washington launched i effort. "It's a terrible time to be out the game," moans commission spoke woman Richann Johnson.

SAPPED ENERGY. Germany has made be ter progress. The need to rebuild easte Germany's aging rail system has giv maglev a boost. A decision to finance t first commercial track is expected soo That would give a lift to a Thyssen-l consortium that includes AEG, ABB, S mens, and Krupp. But commercial dev opment could be far off.

The potential complications go beyo whether the technology can work. I some estimates, the Japanese technolo would guzzle more than 40 times t electricity consumed by bullet trai which only go half as fast. The noi that the trains would make—ev though there's no metal-on-rail—wou make hurricane-force winds sound qui And when it's time for appropriating t money, a fight is sure to ensue betwe high-tech advocates who support magl and transportation experts who want t government to fund cheaper, conventio al, high-speed rail systems, which cu rently can reach top speeds of 186 mp

After the passage of the transpor tion measure, maglev proponents m have thought they saw the end of t tunnel. Maybe so. But until some k details are worked out, it's far from ce tain that the train coming out of t tunnel will ever be a maglev.

By Christina Del Valle and John Car in Washington, with Neil Gross in Tok and Gail Schares in Bonn

IEET VIN WEBER: WILL HE BECOME HE GOP'S NEXT POLICY CZAR?

e representative's recipe for success: Make waves without enemies

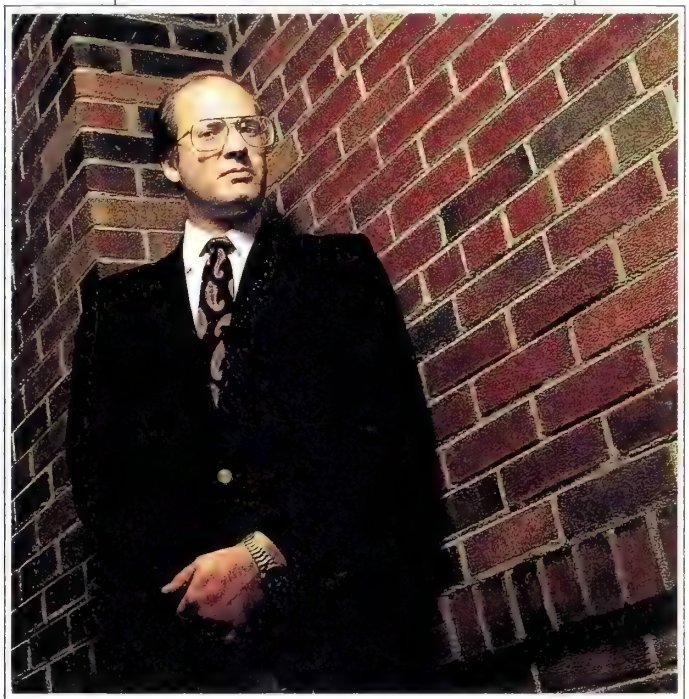
hese are pulse-pounding times for House Republicans. President Bush, sinking in the polls, is finally ning his attention to the domestic is- s dear to conservatives. As Bush be- s work on the crucial election-year cies that he will lay out in his uary State of the Union address, House Young Turks are girding for tle with cautious White House advis- for the soul of the President.

louse Minority Whip Newt grich (R-Ga.) has gotten st of the attention in this uggle. But the key figure he House Republicans' ef- ts to redirect domestic poli- s likely to be Vin Weber, a et, thoughtful congress- n from Slayton, Minn. Al- ugh little known outside shington, Weber, 39, is sidered the brightest star ong his GOP colleagues and ossible successor to Minor- Leader Robert H. Michel Ill.), who may retire soon. Veber, like his mentor using & Urban Develop- nt Secretary Jack F. mp, never tires of promot- his formula for renewed sperity: tax cuts to revive sumer and business spend- , new incentives for sav- , and the conversion of ventional welfare pro- ms to those that will moti- e the poor to seek work. has no use for traditionalists, such as dget Director Richard G. Darman and use Budget Committee Chairman n E. Panetta (D-Calif.), who argue t preserving the 1990 budget agree- nt and preventing a rise in the deficit of paramount importance. "They're high priests of austerity," he says. ey had their shot, and now they have ake responsibility for this economy."

ILLIANT STRATEGIST.' Unlike more asive leaders of the right, such as grich and Senator Phil Gramm (R- .), Weber seems to have made no mies. William J. Bennett, former agan Administration drug czar and ucation Secretary, calls him "one of single most impressive people on pitol Hill." Adds one liberal Democrat- House member: "We could use a bril- nt strategist like Weber."

Although Weber was a leader of the House Republican revolt against the 1990 budget agreement, his low-key demeanor allowed him to retain his reputation as a team player. "He's very well regarded in the White House," says E. Spencer Abraham, a former aide to Vice-President Dan Quayle and now head of the House GOP campaign committee.

In fact, Weber may be ready for his move from policy wonk to political star.



"THE ECONOMY IS IN TROUBLE, AND THE . . . PARTY IS THREATENED"

Just before Congress adjourned for the year on Nov. 27, he was instrumental in persuading Bush to endorse—against the recommendation of his advisers—a "pro-growth" tax package. The move helped inspire a round of tax hearings, which, while airing some House GOP ideas, have proved embarrassing to an Administration that has no plans of its own (page 49). Weber hopes his economic proposal will become the core of the Administration's January blueprint. "The economy is in trouble, and the Republican Party is threatened," he says. "The White House just wants to sit around, so we had to force the issue."

REACHING OUT. Key elements of the Weber plan include a capital-gains rate reduction, faster write-offs of capital investment for business, expanded tax breaks for savings—including allowing first-time homebuyers to use money from their individual retirement accounts without penalty. Some provisions are specifically designed to pick up Democratic support. Weber would repeal the 10% excise tax on luxury goods, a plan favored by Senate Majority Leader George J. Mitchell (D-Me.). And he'd restore some incentives to real estate investment knocked out by the 1986 Tax Reform Act, an idea popular on both sides of the aisle.

Those who know him say Weber's "get-along" style is pure Minnesota. He got the political bug from his grandfather, who had been president of the Minnesota Senate. At 21, Weber helped get former Representative Tom Hagedorn elected to Congress, quickly becoming his press secretary. Four years later, he managed the successful 1978 Senate campaign of lumber magnate Rudy Boschwitz (R-Minn.). "He sat in my kitchen 18 years ago and told me how to run a campaign," Boschwitz recalls. "I decided right there this kid was going to work for me."

As a 28-year-old Reaganite, Weber in 1980 won his first House race, stressing tax cuts, strong national defense, and opposition to abortion. He has been reelected five times to the seat representing the agrarian, and very Republican, southwest corner of Minnesota. He may be a fiscal conservative, but he champions big-money farm programs, and he's not above using his Appropriations Committee seat to send federal bucks home. A couple years back, he won a $420,000 grant for his district to study the feasibility of making ink from soybeans.

Weber's way of making waves without making enemies will be sorely tested. He's likely to find himself fighting Democrats, who will attack GOP tax policy as tilting toward the rich, and a cautious White House that wants to stick with the 1990 budget deal. In the ensuing debate, Weber is likely to find himself in the national spotlight, where the Minnesota marvel may find his new high profile makes him a tempting target.

By Paula Dwyer in Washington

Weber is considered a likely successor to Minority Leader Robert Michel, who may retire soon

KATHERINE LAMBERT

FRANCE

GUILTLESS GORGING IN THE FINE FRENCH FASHION

Butter, foie gras, cream soups, gooey cheeses—and fewer heart attacks

In the holiday crush on Paris sidewalks, shoppers jostle each other for a better glimpse of window displays. Most of them, however, aren't looking at toys or clothes, but at France's main Yuletide passion: food. Slabs of smoked salmon glisten by pots of foie gras and trays of gooey cheese. Visions of pheasant pâtés and butter-cream pastries dance in French heads. It's Christmas in Paris, and the world's most extravagant feeding frenzy is about to begin. As an American living here, I can't wait. It's a chance to cleanse my arteries and lower my cholesterol.

You see, some serious scientists are starting to think that rich French food is good for you. They've decided that all those luscious cheeses are healthier than milk, because their calcium chemistry neutralizes the fat. Drinking red wine boosts one's "good" cholesterol, or high-density lipoprotein (HDL), preventing heart attacks. But the best thing to eat, say cutting-edge French doctors, may be duck and goose fat.

GRANDE BOUFFE. This new theory, a sort of gastronomic Gift of the Magi, hasn't gotten much play in France. The French have eaten like this for generations, and they're a health mystery anyway. They live longer than Americans (77 years vs. 75) and have far fewer heart attacks—yet they eat 30% more fat.

Here's some holiday advice from Dr. Serge Renaud, a prominent pathology researcher in Lyons. "If I had to pick the ideal fat for the human diet, it would be duck fat," he says. It's not just a matter of health. Take French fries cooked in duck fat. "They're delicious," he says. And eat freely of France's ultimate holiday delicacy, foie gras—the liver of force-fed geese and ducks, which is 47% fat. Fat from web-footed birds, researchers theorize, is chemically similar to olive oil and may actually improve your health. That may be why the annual per-capita mortality rate in French foie gras country is half the U. S. level.

In my opinion, most of the extra fat the French eat is consumed in one week: the year's last. During Christmas Eve and New Year's Eve midnight dinners—called *réveillons*—the French gorge like geese. Here's the New Year's Eve menu at the Ritz Hôtel: Caviar quenelles with blinis and cream, chicken-pistachio cream soup, lobster in cognac sauce, wild duck in red-wine-and-foie-gras sauce, arugula-and-truffle salad, chestnut-mousse cake with cream sauce, and chocolates and petits fours. No calories wasted on vegetables, you'll notice.

Christmas dinner at home is less daunting, usually with roast goose or turkey. But first there's smoked salmon, raw oysters, and often foie gras. This month, the French will wolf down nearly 5,000 tons of foie gras, half their annual intake. After the fowl, four or five cheeses are *de rigueur*. So is a *bûche de Noël*—a log-shaped cake plastered with butter-cream frosting.

The French say they don't eat rich food every day. I don't believe them. They drown in butter. They don't serve it with bread, however—to the regret of James A. Baker III, U. S. Secretary State, who complained that Paris restaurants should dip into France's mountainous surplus of state-subsidized butte But what with sauces and pastries, t French eat four times as much butter Americans do. Allegedly they also e more vegetables, but I've rarely se one on a French plate.

RAW CELERY? Perhaps I've never real witnessed an ordinary French fami dinner. Having guests means putting the dog. When foreigners aren't arou and the French aren't upholding the image, maybe they sneak secret orgi of steamed fish and raw celery.

But they don't eat such things do in the Southwest, I can assure you. V lentin Coustaty, a farmer I know in t Périgord, the heart of foie gras countr brags that his wife cooks virtually e erything in goose fat and even adds it soup. Goose-fat soup: Yum! "It's a healthier than butter," says he. Cou taty, 78, also drinks wine with eve meal. Is there a moral here for stresse out city dwellers?

For all the feasting, though, a ne American-style health consciousness spreading in France. The French eat l fat and drink less wine than they us to. Joggers crowd Paris parks, and m robiotic restaurants serve up sprou and oat bran. If this unfortunate tre continues, I think the French may reg it. They may wake up one New Yea morning with all the health worr Americans have.

By Stewart Toy in Pa

CHRISTMAS IN PARIS: VISIONS OF DUCK PATE DANCE IN THEIR HEADS. AND IT MAY EVEN BE GOOD FOR YOU

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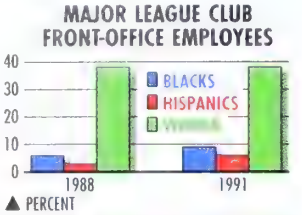
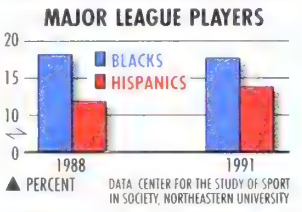
EDITED BY THANE PETERSON

MINORITY HIRING IN BASEBALL: A SCORECARD

Ever since former Los Angeles Dodgers executive Al Campanis opined in 1987 that blacks didn't have "the necessities" for key front-office positions, Major League Baseball has made minority hiring a priority. How much improvement can the Big Leagues show?





A BUSINESS-BASHER GETS THE BOOT

▶ He may be leaving, but he won't be any quieter. Texas Assistant Attorney General Stephen Gardner, who angered companies such as Quaker Oats, Chrysler, and TRW with lawsuits challenging their advertising and business practices, says he's been asked by Attorney General Dan Morales to resign effective Jan. 31. Gardner cites a "difference in priorities." Gardner, who plans to continue handling consumer protection cases in private practice, is unrepentant: "I hope the false advertisers of this country will still have me to kick around."

'AND I WANT A PAY CUT, TOO'

▶ In a rare admission by a top executive that he doesn't have enough to do, Henry Wendt will start working part-time. Wendt, 58, chairman of drugmaker SmithKline Beecham, has also asked that his pay—$1.7 million in 1990—be cut in half. Chief Executive Robert Bauman has handled most management chores since the U. S.-based SmithKline merged with Britain's Beecham in 1989. In his spare time, Wendt plans to write a book.

MORE WOES AT FEDERAL EXPRESS

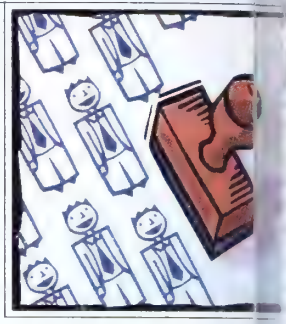
▶ With overseas losses widening at Federal Express, the company says that it may have to take drastic action. On Dec. 17, the package carrier announced that net income fell 29%, to $26.5 million, in its second fiscal quarter, ended Nov. 30, on a 2% decline in revenue, to $1.94 billion, mainly because of problems overseas. FedEx already has downsized in Britain and installed a new international management team, headed by Executive Vice-President Thomas Oliver. FedEx is mum on what it will do, but analysts predict more cutbacks in Europe or a joint venture with another package carrier in some overseas markets.

MACY'S IS TRIMMED IN RED

▶ Christmas doesn't seem to be cause for rejoicing at R. H. Macy. On Dec. 17, The retailer announced a $155 million loss on $1.6 billion in sales for the quarter ended Nov. 2, on top of the $150 million loss the company reported for the year ended in August. Cash flow fell 53%, to $72 million, for the quarter, making it increasingly difficult for Macy's to service its $3.5 billion in debt.

Macy's banks have supported it so far, and the company denies any possibility of a bankruptcy filing. Still, with Christmas looking lousy and huge debt repayments looming in 1993, some Seventh Avenue pundits predict that in order to stay solvent, Macy's will have to sell a major asset—possibly I. Magnin, the upscale store chain it bought from Federated in 1988.

O.K., BUTTON UP—AND BUTTON DOWN



We don't know if the publisher of *Dress for Success* should stoke up the presses yet. But a recent Gallup survey commissioned by Ricoh found that most people want dress codes at work. In fact, they crave dress codes at work. Two-thirds found them "important"; one in three thought they were "very important." What's more, those who found them "very important" also tended be "more satisfied" with their jobs.

The question was part of a larger survey, explains Jim Ricoh's senior vice-president for national marketing. (Ivy his colleagues, dresses almost exclusively in blue suits.) Ro which makes fax machines, copiers, and the like, wanted to a bead on "the evolving mind-set of the office environme the '90s," says Ivy. The popularity of sartorial stand Ricoh thinks, indicates employees want structure and a "t ly run workplace." "Tightly knit" sounds more like it.

NORTHWEST AIR GE CHRISTMAS PACKAG

▶ Chalk one up for North Airlines Chairman Al Che On Dec. 16, Minnesota legislative approval to an million financial package fo the heavily leveraged air Most of the money is for aircraft maintenance bs for Northwest in Minne NWA will also receive a million loan as part of th package. Sources clos Northwest say Checchi, has long coveted Conti Airlines, is looking at bu all or parts of the bank carrier.

ARE THE TEAMSTERS CLEAN AT LAST?

▶ The federal governm long campaign to clean u International Brotherhoo Teamsters culminated in mid-December election dissident local leader to union's presidency. The v Ronald Carey, who won union's first direct electio its top officers, will be first Teamsters leade more than four decade have no alleged links to nized crime.

EDITED BY STEPHEN H. WILDSTROM

HE QUICK ECONOMIC FIX HAT BUSH MAY PROPOSE

he weeks between Thanksgiving and the Jan. 28 State of the Union address were supposed to give the Bush Administration a public-relations bonanza. White House tegists predicted that once Congress left town, the Presi- would go on a tear, lambasting Democrats for the na- 's economic woes and retaking the pro-growth high road. ut an uncooperative economy has given Bush a case of the bles that only seems to be getting worse. TV comics still laughs out of the President's Thanksgiving-weekend effort oost consumption by buying socks at a yland shopping mall. In several con- ssional appearances, Bush's top econom- advisers couldn't seem to agree on ther their boss favored a short-term fis- stimulus or not (page 66).

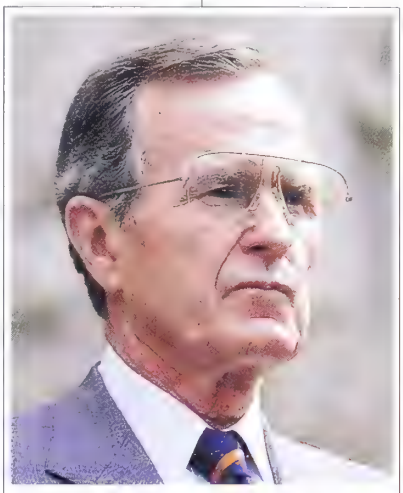
ut perhaps the President's worst day Dec. 17. A *Washington Post*-ABC News showed that his approval rating has ged to a new low of 47%, while a stun- 70% of the public disapproves of his dling of the economy. Soon after, White se spokesman Marlin Fitzwater said "for all practical purposes, the reces- continues"—an assessment too gloomy most forecasters. Then, Bush tried to away from the recession label, saying: finitions, heck with it. Let's get on with business at hand."

IC. The nightmarish day finally ended n House Republicans leaked a story that the White House "seriously considering" a one-time, $300, election-year tax te. That scheme, with its echoes of President Jimmy Car- s ill-fated $50-per-person tax-rebate plan, angered GOP con- atives, who think tax cuts should promote investment. The erberations are eerie: Adjusted for inflation, Carter's plan ld give an average household $310 today.

ome top White House aides quickly pooh-poohed the re- . "A number of proposals are being discussed. And some of them, frankly, are silly," says one. The idea is likely to disappear as quickly as it surfaced. But with final decisions still weeks away, the perception that Bush has no game plan for righting the economy is growing among voters.

Some of the floundering may be unavoidable. The White House is in an awkward transition, with Chief of Staff Samuel K. Skinner and the newly appointed Bush campaign team still settling in at their jobs.

But the real culprit is a deepening sense of panic over the stalled economy. At an extraordinary Dec. 16 meeting with federal bank examiners in Baltimore, the Administration's most senior economic officials put out the word: Do whatever it takes to get banks lending again. And even Federal Reserve Chairman Alan Greenspan is growing ever more worried about the plunge in consumer confidence over the past few months. Although he now says there may be a role for stimulative action under certain circumstances, he believes that the real solution to economic stagnation is a fiscal policy that encourages long-term savings and investment.



GROPING FOR A GAME PLAN

Politics may drive Bush to propose a quick fix. He's still mulling the idea, floated by Budget Director Richard G. Darman, of a two-track strategy. That scheme involves quick action on a middle-class tax cut followed by debate on investment incentives. But that approach is opposed by conservative Republicans, business executives, and congressional Democrats, including Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.).

The cautious Bush, who still talks of maintaining the 1990 budget deal, is unlikely to throw budget discipline to the winds. But his resolve to hold the line against significant new tax cuts is weakening. He believes that no Democrat can beat him next fall. But he now knows that the economy could.

By Howard Gleckman and Douglas Harbrecht

PITAL WRAPUP

NTENDERS

During his period of agonizing over entering the race for the Democratic Presidential nomination, New rk Governor Mario M. Cuomo has me to just one conclusion: President sh is stealing his economic ideas. omo cries "theft" because the Administration is talking about reviving investment tax credit in a 1992 economic-growth package. Cuomo has en urging restoration of the ITC for nths. Next, Cuomo suspects, Bush ll snatch his plan to reward buy-and- ld stock owners with a low capital- ins tax rate and perhaps punish ick-turnover investors. But Cuomo says Bush still isn't on the right track economically: "It would be easy to do just an investment tax credit. The virtue of my plan is that it is holistic."

HEALTH

Politics may be interfering with hopes for a comprehensive health care-reform plan from the Administration next year: After two years of effort, President Bush's Advisory Council on Social Security—which includes members from business, labor, health care providers, and insurers—has failed to reach a broad consensus. Instead, the panel will soon recommend several incremental changes that Bush may float in his State of the Union message. These include malpractice reform, overhaul of insurance for small groups, expanded community and school-based health clinics, and more freedom for states to experiment with ideas of their own. Dissenting panel members complain that White House pressure prevented sweeping reform.

VILLAINS

Operation Desert Storm is long over, but the Administration is still making Saddam Hussein an economic bogeyman. At a Dec. 16 meeting with bank regulators, Treasury Secretary Nicholas F. Brady blamed him for the falloff in consumer confidence—airing a likely campaign theme.

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USTOMS TEARS INTO HE CHINESE RAG TRADE

massive criminal probe covering 10 cities zeros in on a vast pattern of alleged import fraud

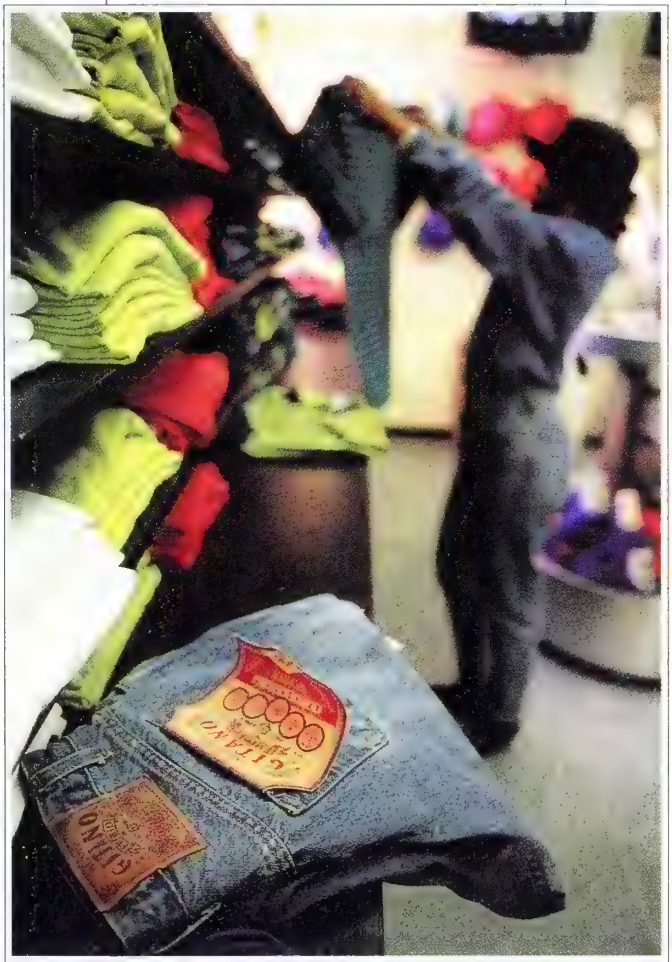
he workday had just started on Dec. 6 when employees at Diletto Inc., a New York children's-wear pany, were startled by visitors. At a.m., 20 U.S. Customs Service nts, some armed, entered Diletto's nent-district offices with a search rant. Three hours later, the agents taking with them six large boxes of uments that Customs is sifting for ence of illegal imports of ese clothing and textiles. tto hasn't been charged any wrongdoing. "I am concerned," says company sident Jack M. Hidary.

ut dozens more U.S. ap- el and textile importers n New York to Los Ange- are quaking. Doing busi- with China may never be same. The Customs sweep art of a massive two-year stigation that is likely to to criminal indictments year. Caught in the web, rces say, are some of the gest garment traders in the . and Hong Kong. Major ilers are likely to be next he hit list.

GUARD. Companies such as Penney, Kmart, and Tar- have all placed orders with ll importers caught in Cus- s' dragnet. And if nothing these big chains could be ght off guard. The investi- on threatens to disrupt r flow of goods from China may force new expendi- s to ensure that their sup- lines are legit. All these panies say they have no wledge of any wrongdoing. nporting illegally] is cer- ly not an act we endorse or port," says Target Stores kesperson George Hite.

all, 63 U.S. importers e swept up in the raids. e than 500 Customs and rnal Revenue Service offi- confiscated corporate rec- at 91 offices in 10 cities. They also seized several million dollars in 18 bank accounts belonging to some of the companies. "It is probably equal to or larger than any criminal investigation we have conducted in recent history," says Stephen DeVaughn, acting director of Customs' office of investigative programs.

Hundreds of Customs agents are now looking for evidence linking importers to illegal trade practices such as cheating on import quotas, undervaluing goods, and selling prison-made products. Potential criminal charges for fraud, money laundering, tax evasion, and other offenses could result in heavy fines and jail sentences. Some U.S. importers whose offices were searched are already discussing plea bargains, Customs sources say, which could widen the investigation.



A GITANO STORE IN NEW YORK
The $800 million retailer was one of the 63 importers whose offices were raided by Customs

BIGGER FISH. While most of the importers caught in the net are little known outside the trade, some are brand-name suppliers. Agents hit several offices of the Gitano Group Inc., an $800 million manufacturer and retailer of sportswear. "We have nothing to hide," says Steve M. Gerber, Gitano general counsel.

Importers got a taste of how tough Customs can be earlier this year when agents in Los Angeles seized 31 containers filled with six million sweaters, slacks, and other goods bound for New York buyers. The items bore labels of Mozambique, Singapore, Portugal, and other countries, though Customs says they were in fact produced in China. Government sources say that the seizure left many buyers high and dry, unable to supply seasonal orders. Then, in September, Customs raided 23 Chinese-owned import and marketing companies in New York and Los Angeles (BW—Oct. 7). Nor is this month's crackdown the end. "We're just scratching the tip of the iceberg," says one Customs official.

The raids put the spotlight on transshipping, a little-known but widely practiced form of fraud in the textile and apparel trade. To protect American manufacturers, the U.S. sets quotas on the volume of goods that can be im-

LARRY FLORD

ported from various countries. Manufacturers sidestep restrictions by shipping nearly finished sweaters and blouses for final assembly to a third country that has room in its quota for further exports to the U. S. As in the Los Angeles case, Customs has also nabbed Chinese-made T-shirts that say they're from Haiti, pants labeled "Made in Lesotho," even knitwear carrying bogus "Made in Lebanon" labels.

U. S. officials believe that as much as $2 billion worth of textiles and clothing that enters the U. S. annually under "Made in Taiwan" and other labels is actually made in China. That's on top of the $4.3 billion in official imports of Chinese apparel and textiles.

FORCING CHANGES. But investigators suspect that many Chinese factories sometimes are unwitting participants in transshipment schemes. Often the real culprits are Taiwanese and Hong Kong manufacturers and their U. S. importers. Faced with rising wage rates at home, Asian manufacturers are turning to China to meet the low prices U. S. retailers demand. Some 65% of all sweaters with Hong Kong labels, for example, were really made in China, says a Hong Kong-based former garment buyer.

The Customs crackdown is sure to force changes in U. S. apparel circles. "It should be a warning for all importers that they should be careful with their business associations and whom they trade with," says Steven M. Kott, director of member services for the American Association of Importers & Exporters. Big U. S. retailers may be forced to do more buying directly through their overseas offices, wiping out thousands of middlemen, says J. Bradley Morrison, management consultant for Kurt Salmon Associates in Hong Kong.

Rather than risk Customs retaliation, many buyers may shift orders from China to other Asian countries. Last year, Hong Kong-based Goetz Trading Ltd. was left holding $300,000 worth of hand-knit Chinese sweaters when Customs wiped out China's remaining quota after uncovering transshipment incidents. Now, Goetz director Stephen Maire does most of his buying in Thailand. Says Maire: "China is out of control." More switches like that would hurt China: The apparel industry is its second-biggest U. S. export earner after toys.

The economy is already giving apparel manufacturers and retailers lots of worries. If Customs' probe turns up evidence of extensive wrongdoing, a weak Christmas season may be only the start of a much more frightening nightmare.

By Amy Borrus in Washington and Pete Engardio in Hong Kong, with Laura Zinn and Joyce Barnathan in New York

Commentary/by Joyce Barnathan

IT'S TIME TO PUT THE SCREWS TO CHINA'S GULAG ECONOMY

It's an open secret that much of the tea in China is produced by forced labor in camps across the country. But in 1984, the Red Star Tea Farm, a prison facility, decided to get more ambitious. The prison struck up a 10-year contract with a Hong Kong trading company, according to official Chinese documents. It now has at least 850 textile looms and is "exporting all of its products." When operating at full capacity, cranking out thousands of sweaters a day, its annual output could be in the hundreds of millions of dollars. "That is a mammoth plant by any standards," says a U. S. Customs Service official.

It's not certain that sweaters from this prison are making their way to the U. S., or even whether the report is accurate. But what is clear is that prison exports are increasingly becoming cause for alarm. It has been a year of nasty surprises when it comes to trading with China, a $60 billion export behemoth. In the spring, the world discovered that the Chinese gulag was active in export markets, despite denials from Beijing (BW—Apr. 22). Then, in recent weeks, came strong allegations of hand-in-glove relationships between U. S. companies and China's camps. The most glaring example is E. W. Bliss Co. in Hastings, Mich., where former employees told Customs that the machine-press company cut deals with a prison in Jiangsu province (BW—Dec. 23). Bliss denies wrongdoing.

CHINA'S COMPETITIVE EDGE

UNHOLY CONVERGENCE. As the scale of China's prison apparatus becomes known, it raises a host of moral and economic issues. Can global players trade comfortably with a country that exploits a vast gulag labor supply? After all, the world levied heavy sanctions against such reprehensible policies as South Africa's apartheid and Soviet gulag labor. Isn't China's forced-labor system just as reprehensible? Isn't it time for companies to police own trade with China and make s those toys and clothes with "Made na" labels now tucked under th weren't made by prison labor?

China's forced labor products m flourishing because of the converge two global trends. Chinese prison a ties are under intense government sure to earn hard currency as a wa self-sustaining—and that means ing. At the same time, U. S. strapped by a recession and ever competition, are searching for the est labor pool around. Now, the nee meshing as U. S. importers—wittin unwittingly—place orders with Chi tralow-cost labor facilities: the pris

Washington is taking stiff actions sure that U. S. obey the law b prison import the trade defic China swells t than $12 billio White House sanctioned a m crackdown by toms involving trade practices prison imports ta cheating. U. porters can no hide behind th that they don't where their goo being made.

Granted, it easy to dete whether goods from a Chines on. In their sea cheap produ China, U. S. ers are swept i world of Asian middlemen in Hong the hub of the China trade. With hi ties to the West and vast knowle the mainland, some Hong Kong can get things done fast and che questions asked. Theirs is a murky of dummy companies, forged shippi uments, offshore bank accounts, a port licenses obtained through brib

Southern China in the 1990s is th East of capitalism, and goods of al including those from prisons, ente Kong freely en route to the rest

nless buyers visit a factory first- ey run the risk of purchasing oods. "Whenever they say: 'No, 't visit the subcontractor,' it's a prison," says AFL-CIO execu- rey L. Fiedler.

LAGE. Although no one knows t size of the prison export sys- getting bigger and bolder all the ccording to Harry Wu, a re- at the Hoover Institution at University and author of the g book *Lao- ne Chinese* there are ,000 camps hina, with a rce of 12 mil- 16 million. them are ls of thou- of political s, says Wu, a risoner him- mates pro- many as 80 for export, machinery, ural goods, xtiles, says Hsia, chief of Eastern Law the Library ress.

of these are camou- in China's ing export s the cotton n fields har- by prisoners textile com- at crank out ? Hsia con- at exports of abor goods een growing since 1988 and that as much as all prison goods are going over- e doubts Beijing officials could practice even if they wanted to.

Chinese officials claim they're But as the centralized state sec- orrhages money, prison exports ainly a bright spot. Citing official documents, Wu says that 30% of earnings go to local prison au- , which then share revenues with Another 30% goes to the labor r improving its products, while 40% covers security costs.

thers say that prison authorities e like entrepreneurs. The prison s under the Ministry of Justice, ok over that responsibility from istry of Public Security, China's secret police. Some analysts suspect that independent-minded secret police still have leverage over prison enterprises. In this argument, prison wardens are loose cannons, hungry to pump up earnings from exports. Then they help line the pockets of top officials in the security and justice apparatus. They may be investing their profits outside China, perhaps even in Hong Kong, quietly backing their own export houses. That would pit the prison export system against legiti-

LABOR CAMP OR FACTORY? THE CATALOG DOESN'T SAY THE ENGINE WAS MADE IN PRISON, BUT THE SIGN ON THE DOORWAY DOES

mate businesses in China that are faced with ever rising labor costs.

If anything, China's prison exporters are becoming more brazen. At the same time Secretary of State James A. Baker III was arriving in Beijing in mid-November, Chinese officials were handing customers a slick catalog at a trade fair in San Francisco. The 60-page booklet advertised goods made in factories in Shandong province, including three labor camps. It even boasted photos of the factory gates of two camps, where the Chinese characters for "labor reform"—a euphemism for reforming prisoners through labor—are visible. And the goods were far from raw materials or textiles. They were producing diesel engines, machine tools, and steel pipes.

There is also growing evidence that some Hong Kong Chinese, Japanese, and Taiwanese are investing in prisons. "Foreign companies provide us with technology, equipment, and managerial know-how," admits China's official labor-reform journal. "This helps improve our competitiveness and create conditions for our entering the international market at a high level." As the quality increases, it may become difficult to distinguish between an Italian-made shirt and one from the camps.

Unfair trade practices aside, some Americans are less than outraged by the idea that China uses prison labor. After all, there's prison labor in the U.S. But there's a huge difference. Prisoners in federal jails make everything from army helmets to office furniture, but they have only one buyer: the federal government. And the work programs at U.S. prisons are geared toward giving inmates skills.

BEATINGS. In China, people often disappear into the gulag without a fair trial or even a fixed sentence. Prisoners, or rather forced laborers, may be ordered to work in the camp factory even when they are set "free."

Take Liu Gang. As one of China's most wanted student activists involved in the 1989 democracy movement, the 30-year-old Liu toils at the Lingyuan General Vehicle Plant, part of a prison production facility in Manchuria, rights activists say. If Liu falls behind on his quota, he is beaten with fists, electric batons, and leather belts. According to Chinese documents obtained by Asia Watch Committee, the human-rights group, the factory has a technology-transfer deal with Japan's Isuzu Motors Ltd. to make car seats and diesel engines. Isuzu denies any dealings with prisons. Whatever the case, Hong Kong papers say these engines, costing around $3,000, are being exported to Africa. The next time you see a price that good, ask yourself "Where was this made?"

Photo courtesy of Florida Department of Commerce, Division of Economic Development

"Florida has what I like to call the two halves of paradise," says Paul Kahn, president of AT&T – Universal Card Services, "an excellent business environment and a fantastic quality of life."

Once upon a time companies that aspired to be players in the financial services industry had to locate in New York. Not anymore.

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Templeton is one of 14,000 finance and insurance firms in Florida which employ more than a quarter of a million people with payrolls totalling nearly $7 billion. Such well-known names as American Express, AT&T, Prudential Insurance, Aetna, Merrill Lynch, Citicorp, Salomon Brothers, Raymond James & Associates, and Blue Cross Blue Shield have flourished in Florida, and more companies keep coming in. During the most recent six-year period for which data was available, the number of firms had increased 33% and employment was up 35%.

Encouraged by the success in Florida of its sister company, AT&T American Transtech, AT&T Universal Card Services moved its corporate headquarters from New Jersey to Jacksonville in 1990. Since then Universal Card Services has grown into the fourth largest issuer of consumer credit cards.

What is the secret to the success of the financial services industry? "We needed a city that could provide employees eager to work for a major corporation," says Paul Kahn, president of AT&T Universal Card Services. "We found good people in Florida, people who understood our goals, were dedicated to serving the customer, and willing to go above and beyond the call of duty. We ended up hiring 1,600 Jacksonville people to staff our operation."

Florida maintains the kind of labor force businesses need through an array of training and education resources strategically located throughout the state: 48 vocational-technical schools, 28 community colleges, and nine state-supported universities with a tenth on the drawing board. U.S. college presidents consistently rank Florida's State University System among the top ten academically in the nation. And the Florida system ranks third in the number of National Merit scholars pursuing undergraduate degrees.

Financial firms also find in Florida the superior communications and transportation infrastructure necessary to conduct business around the corner or across the globe. The state boasts one of the most sophisticated fiber-optic telecommunications networks in the world. And 22 full-service airports move people and products quickly and conveniently to business capital all over the world. Nationally, Florida ranks third in number of airline passengers served.

If bottom-line considerations initially attract finance firms to Florida, the quality of life retains them. Miles of beaches, temperate weather year-round, and an abundance of family-oriented attractions enable businesses to lure and keep the very best employees. Says Jim Lavery, vice president of administration at Prudential Insurance, "Florida provides the positive business climate needed for financial service companies like ours to grow and change to meet the needs of our customers, employees and our community."

Discover your company's potential in Florida. Call (904) 488-5507, ext. 972. Or write on your corporate letterhead to the Florida Department of Commerce, Division of Economic Development, The Collins Building, Suite BW4A, Tallahassee, Florida 32399-2000.

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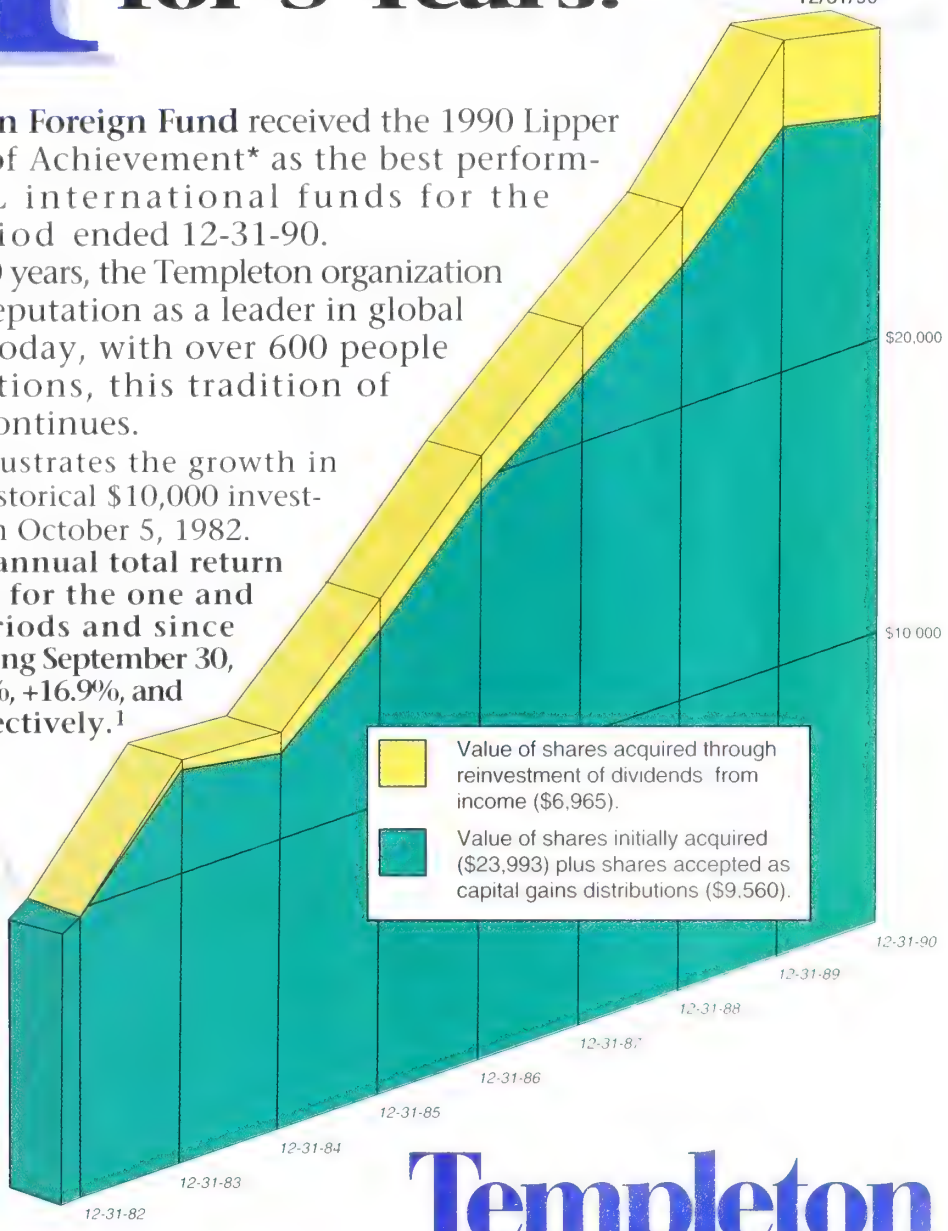

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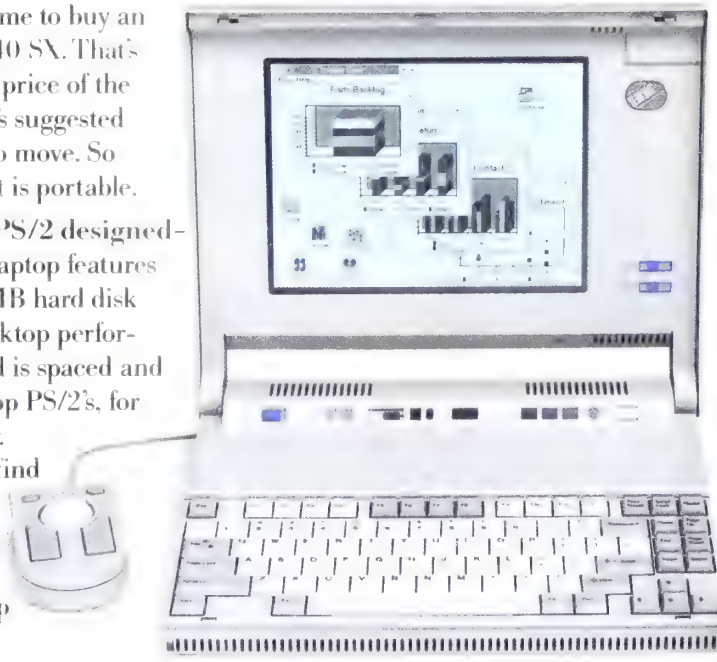

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EDITED BY STANLEY REED

OR A BIG FAT CARROT, ILL NORTH KOREA DROP ITS STICK?

he U. S., South Korea, and Japan have reached a moment of truth in their effort to pry Communist North Korea out of isolation and halt its drive to develop nuclear pons. If their gambit works, the stage could be set for a ge of aid, trade, and investment that would ease tensions in of the world's most volatile regions. Failure, however, d push the Korean peninsula toward new confrontation.

ne of the carrots being dangled before the North's Presi- Kim Il-Sung is economic help. The nonaggression pact ed Dec. 13 could open the way. To show Kim what goodies ould get if he behaves, Presi- Roh Tae Woo summoned the ers of his country's 10 largest ness groups and told them to t developing trade and invest- t plans for the North. The ernment, he added, would fund South Korean invest- ts. A decision by Japan to n diplomatic relations with ngyang, meanwhile, could to big aid and investment s. For its part, the U. S. is aling that it has already re- ed its nuclear weapons from South and will allow the th to inspect key air bases. his will be on President Bush's agenda when he arrives in l on Jan. 5.

HANDS ACROSS THE DMZ: THE PRIME MINISTERS MEET

ON CUT. But before such dreams come true, Kim must e to start dismantling his nuclear weapon programs and mit international inspections. The South Koreans will press North on these points in intensive talks in the coming ks. "We're in a terribly critical period now," says Tony nkung, senior adviser to New York law firm Shearman & ling. "I hope the North is smart and takes advantage of window" of opportunity, adds Namkung, who has at- pted to promote North-South reconciliation.

The North badly needs economic help. Life there is turning markedly harsher. The monthly rice ration has been cut to 26 days' worth, and the average person gets only 11 pounds of meat a year. To make matters worse, the North's major trade partners, Russia and China, are squeezing Kim for hard currency to pay for imports.

But the road leading to political reconciliation and, eventually, reunification, will be treacherous. Kim knows that his isolationist regime risks losing control if the North is flooded with consumer goods and capitalist job opportunities. His nuclear program is a powerful card in his dealings with the outside world, and he won't easily give it up.

POWERHOUSE? Roh's challenge is to create an economic climate that persuades Kim to gradually relinquish his nuclear ambitions. Right now, the two sides are feeling each other out on what industries might be open for South Korean investment. Hyundai wants to develop a resort, Daewoo sees good prospects for making apparel and auto parts, and Goldstar and Samsung are eyeing production of audio and video products. Trade between North and South is already picking up, reaching $150 million this year.

Some South Koreans are optimistic. Chung Ju Yung, boss of Hyundai Group, predicts that the combination of the South's knowhow and the North's cheap labor could create an economic powerhouse. But first the nuclear threat will have to be defanged—peacefully. Roh wants an accord on denuclearization before February's prime ministerial talks, and he has even proposed a first-ever summit with Kim. Whether Kim gives enough to keep the game going probably depends on how desperate economic conditions in the North become.

By Laxmi Nakarmi in Seoul and Robert Neff in Tokyo

BAL WRAPUP

ANCE

ust days after her calls for a Euro- pean industrial policy were rejected the Maastricht Summit, Prime Min- er Edith Cresson is embarking on a and design for a "Fortress France." e is taking rapid steps to find new sh to pump into France's state- ned high-tech sector, a money-loser. her first move, on Dec. 18, she an- unced that she would shift both gi- t Thomson's consumer electronics di- ion, which lost $490 million last year, d its debt-heavy chipmaker, SGS- omson Microelectronics Inc., to the dustrial arm of the French Atomic ergy Commission (CEA), which har- bors $3.8 billion in liquid assets. Industry sources think she also wants to assign sputtering computermaker Groupe Bull to France Telecom, a virtual cash machine. A similar shuffling of the French aeronautics industry may also be in the offing.

Proponents of Cresson's strategy, including Industry Minister Dominique Strauss-Khan, proclaim that it makes sense because it would achieve important synergies. For instance, they contend that the diverse holdings of the new Thomson-CEA-Industries, which will have $16 billion in combined revenues, will buffer each other's ups and downs on the model of German powerhouse Siemens. But the real goal seems to be to get the Thomson and Bull units the $4 billion they will need to develop high-definition TVs and new semiconductors and computers in the coming years while skirting European Community rules about direct government subsidies.

Cresson's critics doubt that the state has the business acumen to decide what technologies to back, and they point out that executives at CEA and France Telecom, which both operate in protected markets, have no experience running such cutthroat businesses as computers and consumer electronics. They worry that the "solid ship" Cresson says she is building to weather Europe 1992 could sink like the Titanic.

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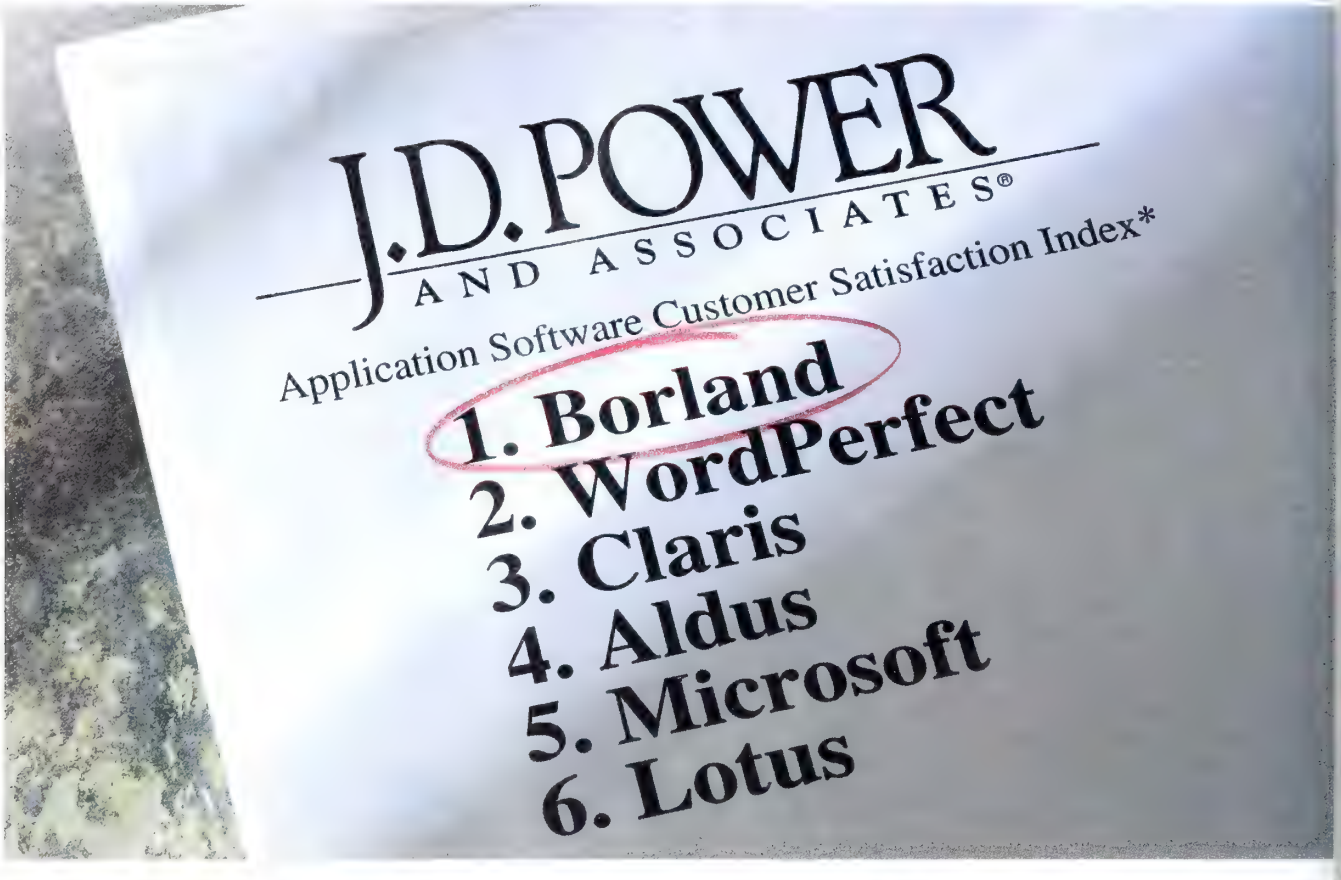

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WHERE TO INVEST IN '92

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INTRODUCTION

ure, there's an ugly cession out there, but on't despair. Oil is heap, inflation tethered, nd the prime dropping. hat's a good basis for vestment gains, even in modest recovery

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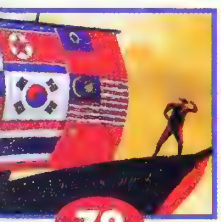
THE ECONOMIC FRAMEWORK

he pain from 1980s xcesses will continue to 1992. An upturn ems likely come spring, ut deep problems will ersist. And don't look to Vashington for solutions



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STRATEGIES FOR STOCKS

he poorly performing ow may mask a far ronger market. Also in is section, advice on aying Europe, the acific Rim, and Latin merica's *salsa bolsas*

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THE INVESTMENT SPECTRUM

Mutual funds: Tough act to follow. Bonds: The big gains are past. Junk: '91 was a banner year, but... Also, the lowdown on munis, futures, hedges, real estate

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1991'S BEST AND WORST

Brokerage stocks cake-walked down Wall Street; oil stocks tanked. OJ was juicy; Argentina sizzled. For more, see our annual list of winners and sinners

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THE INVESTMENT SCOREBOARD

In these dicey times, the financial intelligence that BUSINESS WEEK has gathered on 900 publicly traded companies is more indispensable than ever

DON'T LET THE ECONOMY SCARE YOU

DESPITE A LACKLUSTER RECOVERY, OPPORTUNITIES ABOUND

Be careful of what you wish for, the old saying goes, your wishes just might be granted. Any investor who has ever wished for low interest rates and low inflation—a potent prescription for success in the financial markets—now has them. The stock market rallied, the bond market boomed, and returns on mutual funds—the Everyman's investment—dazzled during 1991. So why are investors so subdued?

They got investment success, all right, but it came during a recession that seems to have hung on for far too long. Consumer spending is still slack, new layoffs—white-collar layoffs at that—are announced almost daily, and despite the easy money policy at the Federal Reserve, the economy doesn't seem to have much spark.

Still, while bringing pain, the recession doesn't look so bad by some measures, notes James B. Stack, who analyzes the economy and the financial markets for the *InvestTech Market Analyst* in Whitefish, Mont., far from the madding crowd.

"Don't wallow in the bad-news headlines," says Stack. "Look at things objectively." Oil is selling below $20 a barrel. Inflation, as measured by the consumer price index, is the lowest of any recession since 1970. Unemployment is lower than in two of the last three recessions (table). The prime rate, the benchmark lending rate for many borrowers, is where it was at the end of the 1970 recession, and the drop in short-term interest rates should force it down soon.

MILDER REBOUND. All told, those factors should provide a pretty good foundation upon which to build an economic recovery—and generate further investment gains. And BUSINESS WEEK's 1992 Investment Outlook can help you find profitable opportunities.

Investors will need patience in 1992. Economic growth will be sluggish until midyear, a survey of economists finds, and the rebound expected for the second half will be less than what's typical for postwar recoveries (page 62). The politicians are posturing to make it look as if they're trying to help the economy. Most likely, they'll pass some tax breaks, but not enough to put the economy in high gear (page 66).

The stock market can still expect gains, but they, too, will be more modest than those in 1991 (page 70). The biggest returns should come from the stocks of small companies, many of which have been barely touched by the recession (page 72). The new-issue market, the source of many of those highfliers, is on a tear (page 76). And equity mutual funds, which outpaced the big averages, should stay on a roll (page 132).

If you prefer to invest in stocks directly, check in with some of the pros and their model portfolios (page 130). If you would rather do your own research, there's a trove of data in the Investment Outlook Scoreboard on 900 companies (page 173). Once you have a portfolio that suits your needs, we tell you some new ways to hedge it (page 148). Don't forget about foreign stocks. Interest rates are starting to come down abroad, and that opens up an opportunity for stocks. Many European stocks look compelling as Britain and nations of the Continent unite into the world's larges trading bloc (page 124). On the othe side of the globe, the woes of Japan' stock market stand in sharp contrast t the opportunities in surrounding coun tries (page 126). Some of the most tanta lizing markets are south of our borde (page 128). In fact, one of 1991's win ners, the best-performing foreign stoc market, was Argentina's (page 162).

TREAD CAREFULLY. Most bond investor can also look forward to a good year with inflation and interest rates in chec (page 136). Municipal bonds should re main popular as folks try to duck highe state and local income taxes, but cautio is in order. Many issuers' finances are i shambles (page 144). Don' count on any big return from junk bonds, whic soared in 1991 (page 140 That was largely a reboun from two disastrous years.

The investment world i more than just stocks an bonds. How about commo ities? You can cut down o the risk by investing throug a managed commodity fun (page 146). Real estate, mor familiar ground, is still slow but low interest rates hav put some life back in the re idential market (page 152). The lack o inflation means another poor year fo precious metals (page 156). The art ma ket remains quiet, too, but that's jus fine for picking up Old Masters and a tiquities at reasonable prices (page 160 If your taste—or wallet—favors pop cu ture, such collectibles as toys, movi posters, and sports memorabilia fro the '60s and '70s are hot and more a fordable, too (page 157).

Historically, a strong stock mark and the decline of interest rates are ha bingers of a stronger economy. Th great hope for 1992 is that despite th gloom and despair, history will repea itself.

By Jeffrey M. Laderman in New Yo

A PAINFUL RECESSION, BUT OTHERS HAVE BEEN WORSE

RECESSION	1970	1974	1980	1982	TODAY
UNEMPLOYMENT RATE*	6.1%	9.0%	7.8%	10.7%	6.8%
PRIME RATE**	7.5%	8.5%	11.5%	12.0%	7.5%
CONSUMER PRICE INDEX**	5.4%	9.7%	12.2%	4.1%	2.9%

DATA: INVESTECH *HIGHEST LEVEL REACHED **RATE AT END OF RECESSION

ILLUSTRATIONS BY MICK WIGGINS

LIBERTY

THE PAIN FROM THE EIGHTIES ISN'T OVER YET

EVEN WHEN AN UPTURN ARRIVES, STRUCTURAL PROBLEMS WILL REMAIN

The penance for the sins of the 1980s continues. The gravest transgression: a debt burden lifted to its highest level in a half-century. Already, the cost of deleveraging includes an aborted recovery in 1991, and it will weigh heavily on the outlook for 1992. The bottom line: The U.S. economy faces yet another tough year.

The economy will begin 1992 either dead in the water or in a second leg of decline, according to BUSINESS WEEK's national panel of 50 forecasters (table). A lasting upturn will begin by spring, they say, but structural problems born of the 1980s' excesses will hurt the recovery.

On average, the economists expect real gross domestic product to grow a subpar 2.2% during 1992, including a second-half pace of only about 3% (table). Tepid growth will keep inflation in check, with a forecast of only 3.3%, as measured by the consumer price index. The prime and unemployment rates will end 1992 about where they finished in 1991, but interest rates will fall in the first half, while joblessness will rise.

RECORD DEBT. "We've been in a period of stagnation since 1988 that is structural, not cyclical," says Laurence H. Meyer, president of the St. Louis-based consulting firm that bears his name. Indeed, real GDP has not grown faster than 1.9% in any quarter since early 1989. Long-term problems—including record consumer indebtedness, a burgeoning federal deficit, the squeeze on state and local governments, overbuilding in commercial and multifamily construction, an undercapitalized banking system, and difficulties in securing credit—will continue to bear down on the economy in 1992.

One in three forecasters expects real GDP to decline in both the fourth quarter of 1991 and the first quarter of 1992. Nearly all the rest see no solid gains until spring. "There's no engine of growth," says Donald Ratajczak of Georgia State University. Almost all agree that consumers are out of the picture until a better job market revives income growth and confidence. And businesses aren't about to expand their payrolls, inventories, or investment in new plant and equipment until demand rises.

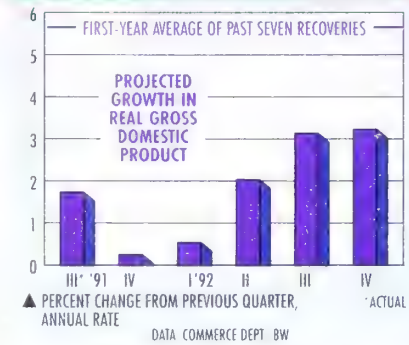
But getting the market back on track will not be easy. "Many of the job losses are above middle-income levels," says Lacy H. Hunt of Hongkong Bank Group. "And they are permanent, not cyclical." But even the pessimists concede that layoffs will subside next year, and improvement in inflation will lift real incomes.

LEAD WEIGHT. In early 1992, however, Corporate America will still be under pressure to cut costs and shore up sagging bottom lines. "Profits will continue to be weak," says Paul Boltz of T. Rowe Price Associates Inc., "but they will look better than 1991 because they are coming off such a low base." Although restructurings have slowed the pace of labor costs, profit margins remain a problem. They have not improved because falling inflation amid weak demand robs companies of pricing power.

The economy's structural problems are like a lead weight on demand, but most forecasters believe Washington policy will help lighten the load. The Federal Reserve has already cut the federal funds rate 14 times since July, 1990, from 8¼% to 4½%. And a growing number of analysts believe that money-market rates will fall below 4% before it's over. "The Fed has not reduced interest rates as much as in past recessions, and real rates remain high," says Robert Brusca of Nikko Securities Co.

Lower rates are imperative to the deleveraging process, as businesses and consumers lighten their debt burdens and improve their cash flow. "We have to reliquefy, which means more reductions in interest rates," says Joseph Carlson of Chemical Bank. Businesses swapped debt for equity at the fastest

THE FORECAST: STAGNATION, THEN A MODEST RECOVERY



▲ PERCENT CHANGE FROM PREVIOUS QUARTER, ANNUAL RATE

DATA: COMMERCE DEPT. BW

WHAT ECONOMISTS ARE PREDICTING FOR 1992

	Percent change in real gross domestic product					Real GDP	Consumer prices	Prime rate	Unemployment rate
	1991	1992				Percent change		1992	1992
	IV	I	II	III	IV	IV Q '91-IV Q '92		IV Q	IV Q
LIO MARTINI Sanford C. Bernstein	0.8%	1.5%	4.2%	4.8%	5.5%	**4.0%**	4.6%	8.5%	6.1%
ARLES G. RENFRO Alphametrics	0.9	2.6	3.1	4.3	5.4	**3.9**	4.7	8.5	6.7
Y C. FAIR Fairmodel, Macro Inc.	1.9	3.1	3.4	3.5	3.4	**3.4**	3.4	8.6	6.1
ER L. BERNSTEIN Peter L. Bernstein	1.0	2.1	3.2	3.6	3.8	**3.2**	3.5	7.5	6.3
BERT BRUSCA Nikko Securities	−1.4	−1.6	5.0	5.5	4.0	**3.2**	2.3	7.5	6.5
RY L. JORDAN First Interstate	1.5	2.7	3.5	3.3	3.2	**3.2**	3.5	8.0	6.3
VRENCE A. KUDLOW Bear Stearns	0.7	3.3	3.2	3.1	3.1	**3.2**	2.9	7.0	6.5
L H. HYMANS RSQE, University of Michigan	0.5	2.2	3.1	3.9	3.2	**3.1**	3.4	7.8	6.5
RT E. KARL The WEFA Group	1.8	1.2	3.0	4.2	4.0	**3.1**	2.7	7.5	7.1
HARD A. STUCKEY Du Pont	−0.6	−0.1	3.8	4.4	4.4	**3.1**	3.8	7.5	6.6
RK J. BILS University of Chicago	2.0	3.0	3.6	4.0	3.8	**3.0**	3.2	8.0	6.2
NALD P. HILTY Chrysler	0.3	2.6	3.0	3.0	3.6	**3.0**	3.7	7.9	6.6
CHAEL R. PASLAWSKYJ The CIT Group	0.6	1.2	3.3	3.9	3.5	**3.0**	2.9	7.0	6.6
RRIS COHEN Morris Cohen & Associates	1.2	1.8	2.8	3.2	3.6	**2.9**	3.5	8.0	6.6
GER BRINNER DRI/McGraw-Hill	0.6	−0.2	2.9	4.2	4.2	**2.8**	3.7	7.8	6.5
SALIND WELLS NPD Group	0.6	1.6	2.5	3.2	3.9	**2.8**	3.4	8.0	6.6
NETH T. MAYLAND Society National Bank	0.5	0.3	2.0	4.5	4.0	**2.7**	3.7	7.5	6.6
RENCE H. MEYER Laurence H. Meyer & Associates	0.0	1.1	2.5	3.8	3.6	**2.7**	3.0	7.5	6.8
ON BENDERLY Benderly Economic Associates	1.2	2.0	3.0	3.0	2.5	**2.6**	3.3	6.5	6.5
ID HALE Kemper Financial Services	−0.5	0.0	2.8	3.6	4.0	**2.6**	3.6	7.5	6.8
ID M. BLITZER Standard & Poor's	0.8	1.9	3.5	3.8	3.2	**2.5**	3.7	8.0	6.5
L W. BOLTZ T. Rowe Price	1.0	1.0	2.5	3.0	3.1	**2.5**	3.8	8.0	6.3
RY L. CIMINERO Fleet Norstar Financial Group	−0.3	0.9	2.9	3.1	3.3	**2.5**	2.9	7.2	6.8
KATHRYN EICKHOFF Eickhoff Economics	−0.1	1.7	2.4	2.8	2.9	**2.5**	3.6	6.8	7.0
PHEN R. GOODWIN Cartwright & Goodwin	0.5	1.5	2.0	3.5	3.0	**2.5**	3.3	6.0	7.5
URY N. HARRIS PaineWebber	−0.5	1.5	3.0	3.0	2.5	**2.5**	3.5	7.0	6.7
WARD L. KEEN Conrail	0.2	0.7	2.1	3.9	3.2	**2.5**	2.9	7.4	7.0
RNARD M. MARKSTEIN Meridian Bancorp	0.4	2.3	1.5	2.5	3.6	**2.5**	2.5	7.1	6.5
ART G. HOFFMAN PNC Financial Corp.	0.0	0.7	2.7	3.1	2.9	**2.4**	3.6	7.2	6.6
EPH W. DUNCAN Dun & Bradstreet	0.8	−0.8	2.6	3.4	3.7	**2.2**	3.2	7.8	6.5
ARLES B. REEDER Charles Reeder Associates	2.6	0.6	1.3	3.2	3.6	**2.2**	3.7	7.3	6.8
L FOSLER Conference Board	0.4	1.1	1.6	2.5	3.2	**2.1**	3.8	7.0	6.6
LLIAM W. HELMAN Smith Barney	0.0	0.0	2.4	3.0	3.0	**2.1**	3.3	7.0	6.7
CKEY D. LEVY CRT Government Securities	0.0	0.7	1.8	2.5	2.8	**2.0**	3.5	7.5	6.6
NALD H. STRASZHEIM Merrill Lynch	−1.0	−1.0	2.4	3.4	3.1	**2.0**	3.5	7.0	6.7
ECZYSLAW KARCZMAR Deutsche Bank AG	−1.0	−0.5	1.0	3.8	3.1	**1.9**	4.5	7.2	6.5
NALD RATAJCZAK Georgia State University	0.3	−0.5	1.1	2.7	3.2	**1.8**	3.4	7.8	6.9
ADI CATTO Texas Instruments	0.0	1.3	1.5	2.0	2.0	**1.7**	3.2	7.5	6.5
VID G. HENSLEY Univ. of Calif. at Los Angeles	−0.2	−1.0	1.4	3.1	3.4	**1.7**	2.7	7.0	7.5
RL J. PALASH McCarthy, Crisanti, Maffei	−1.0	−1.0	2.0	3.5	2.0	**1.6**	2.8	6.8	7.0
BERT H. CHANDROSS Lloyds Bank	−0.2	−1.0	2.1	2.6	2.5	**1.5**	3.3	6.8	7.0
BERT T. McGEE Tokai Bank	0.0	0.0	1.0	2.0	2.0	**1.2**	2.5	6.0	6.8
ARLES LIEBERMAN Manufacturers Hanover Securities	−0.8	−1.3	−0.5	2.4	3.3	**1.0**	2.9	7.5	7.5
CHAEL EVANS Evans Econometrics	−2.0	−1.1	−0.6	2.0	2.5	**0.7**	3.9	7.0	7.5
WARD YARDENI C. J. Lawrence	−1.5	−1.0	0.0	2.0	2.0	**0.7**	3.0	7.0	6.7
SEPH CARSON Chemical Bank	−0.8	−1.2	0.0	1.6	2.2	**0.6**	3.3	6.5	7.3
Y H. HUNT Hongkong Bank Group	−1.2	−1.3	0.0	1.8	1.3	**0.5**	3.0	6.5	7.3
ILIP BRAVERMAN DKB Securities	−1.0	−1.0	−1.0	1.5	1.5	**0.0**	2.5	6.5	7.2
GARY SHILLING A. Gary Shilling & Co.	0.5	−3.0	−4.0	−2.0	4.0	**−1.1**	1.8	6.0	10.0
BERT H. PARKS Robert H. Parks & Associates	−2.0	−4.0	−2.0	0.0	0.0	**−1.5**	2.0	5.0	8.5
NSENSUS	0.2%	0.5%	2.0%	3.1%	3.2%	**2.2%**	3.3%	7.3%	6.8%

rate in eight years in 1991, and consumers paid down IOUs at a record clip. Richard A. Stuckey of Du Pont estimates that mortgage refinancing alone will add $50 billion, at an annual rate, to consumer spending by the second quarter.

BANK SINS. If any industry must atone for its past sins, forecasters point to financial services, especially banks. Bad loans, especially to real estate speculators and Third World countries, have left banks severely undercapitalized, which is particularly troubling in the face of increased oversight by regulators. As a result, banks have cut back on their lending. However, this so-called credit crunch is finally easing, some economists say. Banks' cost of funds has fallen sharply, helping to boost operating profits, and most of the big write-offs have already been taken.

In addition to lower rates, economists expect an election-year package of fiscal stimulus, although it will not kick in until the second half, and some of the thrust will be blunted by the fiscal drag from state and local governments.

The type of stimulus will be important. "No quick-fix fiscal policy will correct the long-term imbalances in this economy," says Howard L. Keen of Consolidated Rail Corp. The bond market is worried that a costly tax cut will enlarge an already bloated deficit and fuel inflation. As Georgia State's Ratajczak puts it: "Anything that buys votes is bad for the economy." An ill-conceived fiscal package could keep long-term interest rates high and work against recovery.

> MANY JOB LOSSES ARE ABOVE MIDDLE-INCOME LEVEL—AND THEY'RE NOT COMING BACK

Lower long-term interest rates are crucial to the expected improvement in housing and capital spending, which should also get a lift from the expected revival of the investment tax credit. But even lower rates cannot help commercial construction. "The most serious drag on this economy is the oversupply of office and industrial buildings," says Saul B. Hymans of the University of Michigan.

In such a subdued climate, inflation will be the best part of the outlook for 1992. "Traditionally, inflation has continued to decline 12 to 18 months into recovery," says Michael R. Paslawski of CIT Group Inc. Also, low inflation is a by-product of deleveraging, as many asset prices adjust downward from the overvalued levels of the 1980s.

Life without debt is the new reality of the 1990s. The forecasters believe that the economy is returning to the straight and narrow of financial responsibility. But as was learned in 1991, the journey will be neither quick nor painless.

By James C. Cooper and Kathleen Madigan in New York

THESE BEARS ARE SHEDDING SOME OF THEIR BEARSKIN

Last June, the government released a flurry of upbeat April and May data that led most economists to believe that recovery was at hand. But not everyone was convinced. Economists such as Charles Lieberman of Manufacturers Hanover Securities, Lacy H. Hunt of the Hongkong Bank Group, Robert Brusca of Nikko Securities, and DKB Securities' Philip Braverman stuck to their recession guns. That bearish view—which seemed so out in left field in the summer—looks right on target today.

Why was the consensus forecast of recovery so off base? "The two arguments people made for recovery," Lieberman notes, "were that spending would pick up because of the surge in consumer confidence [following the Persian Gulf war] and that manufacturing would lead the way as output increased and demand rose." The problem, he says, was that the postwar spurt in purchases was not matched by gains in hiring and income, and consumers did not have enough savings to keep spending at high levels.

Lieberman also argues that manufacturing couldn't lead the overall economy into recovery because final demand was not strong enough to keep output growing. He points out that the backlog of factory orders, excluding transportation equipment, has been flat since March—a sign that demand was never on an upward track.

MANNY HANNY'S LIEBERMAN: ON TARGET

The bears give low marks to the Federal Reserve. Policy moves were too infrequent and too timid to give the economy a big enough interest-rate shock to lift demand. And the Fed did little to end the credit crunch which prevented small businesses from getting loans, say these economists.

Dismal job growth was another big negative in 1991. Although the worst of the layoffs are likely behind us, Hunt argues that the downsizing of some companies means that many white-collar jobs are gone forever.

SLUGGISH UPTURN. Looking ahead, these economists are shedding their bearskins, mostly because interest rates are finally low enough to spur activity in credit-sensitive areas such as housing. Lieberman expects real gross domestic product to grow nearly 3% in the second half. Braverman and Hunt also expect a second-half upturn, but at a much more sluggish pace.

Brusca bullishly forecasts bursts of growth in excess of 5% in the middle of the year. Such a pattern is typical of past recoveries.

If Brusca's projections for 1992 are as correct as his outlook for 1991, such a strong recovery would prove the consensus forecast wrong once more. But a fired-up economy surely would make a lot of out-of-work consumers and profit-hungry businesses very happy.

By Kathleen Madigan

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A TAX PLAN TO PLEASE EVERYONE—AND NO ONE

WASHINGTON WILL LIKELY AVOID TOUGH STEPS

For politicians, these are the worst of times. With elections just 10 months away, the economy is stagnant, voters are angry, and all the easy answers seem to have evaporated. Because the first instinct of lawmakers is to "do something," Congress and President Bush will return to Washington in late January with much-ballyhooed economic recovery plans. And by spring, they will likely agree on some sort of antirecession package. But the plan—built on a modest collection of tax cuts—will have a lot more to do with politics than economics.

That is not surprising. After all, it's far from clear that old-fashioned Keynesian fiscal stimulus, even if properly applied, could cure what ails this economy. The normal challenge at the bottom of a business cycle is to put enough money in consumers' hands that they can buy up excess stocks of goods and get factories humming. But this time the problem is too much debt—not too much inventory of consumer goods.

The late 1980s real estate crash has wrecked banks and thrifts, ruined the construction industry, and left homeowners shell-shocked. Massive corporate debt and restructuring have generated widespread layoffs and deep fears among employees who have been spared. And staggering personal debt has families cleaning up their balance sheets.

PARADOX. Then there's a budget deficit headed beyond $350 billion. The traditional response to recession has been a fiscal package equal to at least 0.5% of gross national product. Today, that's about $30 billion a year, far more than lawmakers are prepared to consider.

And there's a policy paradox: Efforts to spur more borrowing and consumption might give the economy a jolt in the short run but at the price of recreating the very circumstances that caused the recession, such as a burdensome pileup of new debt. On the other hand, steps to encourage more savings—while clearly beneficial in the long run—may only add to the short-term sluggishness.

Many economists argue that the best thing Washington can do is nothing at all, since they worry that the cure might be worse than the ailment. Most who counsel action want to address the long-term problems of savings and investment—and not provide a quick fix. Says John B. Taylor, a former member of President Bush's Council of Economic Advisers: "Whatever we do has to work in the long run."

But in an election year, neither long-term thinking nor benign neglect is on the agenda. The Federal Reserve, as usual, will be expected to do the heavy lifting, although it may not have much more room to cut rates. In January, Congress and the White House will jump right in with dueling—and largely symbolic—economic-growth plans.

In the end, their struggle will reprise a familiar debate. Democrats will demand tax "fairness," combining cuts for the middle class with higher levies on the wealthy. Bush will resist tax hikes for the rich and will try to shift the argument to the need for investment.

By spring, once the rhetoric is exhausted, Congress and the White House should be able to agree on a modest pastiche. The most likely outcome is a tax cut worth about $10 billion to $15 billion a year that includes reductions in capital-gains taxes, generous new rules on individual retirement accounts (IRAs), middle-income tax relief, and a handful of business tax cuts. And despite Bush's objections, a tax hike for the wealthy will likely be included. Says Conference Board Chief Economist Gail D. Fosler:

THE OUTLOOK FOR TAX PROPOSALS

Proposals	Chances
CUT TAXES ON CAPITAL GAINS Bush will insist on this as part of a broad fiscal stimulus package. Democrats will go along if Bush agrees to raise other taxes on the wealthy. There's growing interest in indexing gains for inflation	*Some version should pass*
BROADEN ACCESS TO IRAs Strong support among both parties and in the Administration to expand individual retirement accounts—expensive, but voters love it	*A good bet*
GIVE THE MIDDLE CLASS TAX RELIEF Bush doesn't believe it will help the economy, but Democrats argue that the middle class is bearing an unfair tax burden	*Good, purely on political appeal*
RESTORE THE INVESTMENT TAX CREDIT Congress' favorite recession cure. Critics worry it would subsidize planned investment, not encourage new investment	*A version targeted for investment above certain levels is the best bet*
TAX THE RICH The Democrats love the idea, and it's a way to pay for tax breaks. Bush may trade off higher taxes on the wealthiest individuals for a capital-gains tax cut	*Some tax increase on the highest incomes is a done deal*
GIVE REAL ESTATE DEVELOPERS A BREAK Lawmakers might let developers, once among their biggest campaign contributors, write off real estate losses against other income. But this move could come under fire as a sop to special interests	*A long shot*

veryone has to be able to declare a tory."

But there may not be that much to er about when the process is com-te. Many of the plans, such as newly hioned IRAs, are more likely to help y in the long term, if at all. And even $15 billion, the package will be far too all to pack any punch in a $5 trillion nomy. Says William C. Melton, chief nomist at IDS Financial Services Inc.: ney'll have a proposal so they can say y did something, but design it so it esn't do anything at all." One possible ght side for the pols: If they're lucky, tax cuts will kick in at just about the e the economy begins to turn around, midyear 1992. Both Bush and the mocrats would take credit for a recov-that was about to happen anyway.

LSE CONFIDENCE? There may be a price be paid for all this political maneuver-. Hitting on a plan that does not tear ribbons the few remaining shreds of dgetary credibility left in Washington l be a neat trick. And providing a host new tax breaks, while possibly raising es, could undermine the fragile com-mises behind the Tax Reform Act of 6. Already lobbyists are salivating er the prospect of a free-for-all over w tax subsidies.

Any action that raises the deficit will rther reduce the Fed's flexibility. ce August, the central bank has cut ort-term interest rates five times, to %. Fed Chairman Alan Greenspan and ce-Chairman David W. Mullins Jr. ve fretted publicly about the econo-'s doldrums, and some at the Fed are ginning to question whether the central bank's moves can make much difference. Governor Wayne D. Angell argues that easier money would only raise inflation fears and prop up long-term interest rates. And Governor John P. LaWare, meanwhile, maintains that lower money-market rates will neither lift consumers' spirits nor make banks more eager to lend. "Confidence is not determined by interest rates," he says.

There are signs that earlier easing may finally, with the proverbial lag of several months, be boosting the money supply. Growth in M2 has picked up a bit since October, and bank reserves—the raw material for money—are expanding at double-digit annual rates. But there's no evidence yet that this has fed through to the real economy by spurring consumer purchases or pumping up industrial output.

> THE USUAL CURES FOR A WEAK ECONOMY WON'T WORK IN THIS CLIMATE

What's more, the Fed would dearly love to lie low in an election year. Greenspan and his colleagues won't let the economy tumble back into recession just to stay out of the political fray. But they're hoping that the lower rates and extra money they have put in the pipeline already will produce enough growth—even if it's slow—to keep the Fed on the sidelines through November.

So the spotlight will shine even more brightly on tax fixes. What will Washington do? Here is a rundown of some likely proposals and their prospects:

■ **Capital gains.** On his fourth try, the President should finally get a new tax break for investors. But there are at least a dozen different schemes around—and it is far too soon to tell which one will prevail. Bush would cut rates for capital gains on virtually all assets. Democrats are tinkering with tax cuts for only a narrow range of investments—say, startup companies. And in recent weeks, lawmakers of both parties, as well as some Administration officials, have been considering indexing gains for inflation. That would prevent investors from having to pay tax on illusory profits created by rising prices.

■ **Investment tax credit.** This traditionally Democratic nostrum for spurring the economy is now winning strong Republican support. White House aides recently hinted that they are leaning toward some kind of credit. The last ITC, repealed in 1986, allowed businesses to take a 10% credit against any equipment investments. A new version would likely be targeted to only certain types of equipment and be applicable only on investments made over and above a company's historical level of investment. That way, the credit would be less of a tax loser for Treasury and wouldn't be perceived as too generous to business.

■ **Individual retirement accounts.** Hefty new incentives for IRAs may be the most popular proposal of all. Everyone seems

BUSH STILL SHUNS HIKES FOR THE RICH . . .

. . . a plan. Most would restore the $2,000 deduction for all individuals, regardless of income. The 1986 act curbed deductions for individuals making more than $35,000 or who participated in employers' retirement plans. Most proposals would also allow withdrawals for education, health care costs, or for a downpayment on a home.

Several plans also include a new twist on the traditional IRA, which exempts contributions from income taxes but requires investors to pay tax on withdrawals. Many of the new schemes, including those proposed by Senate Finance Committee Chairman Lloyd Bentsen (D-Tex.) and Senator William Roth Jr. (R-Del.) would give savers another choice. They could contribute aftertax dollars but withdraw money without paying tax on accumulated earnings. Taxpayers could also shift existing IRAs that they began in earlier years to this new version. These new "backloaded" IRAs would have a big impact on the Treasury. In the near term, they would generate much-needed revenues, but in the long run, they would cost the government billions.

■ **Middle-income relief.** The Democrats are pounding Bush over his reluctance to back a tax cut for the middle class. Although Bush aides privately doubt that a middle-class tax break will jumpstart the economy, they are getting tired of being beaten up over the "fairness" issue. So the President will almost surely include a tax break for middle-income workers in the recovery package he announces in late January. Unlike most Democratic plans, Bush may well offer only a temporary cut.

The Democrats are exploring several different approaches. House Ways & Means Committee Chairman Dan Rostenkowski (D-Ill.) wants to give taxpayers an income tax credit of up to $200 to help offset Social Security payroll taxes. Senator Daniel P. Moynihan (D-N. Y.) urges a more direct solution: Simply cut the payroll tax. Bentsen favors a new credit to families with children, and other lawmakers prefer raising the standard deduction.

■ **Real estate.** Real estate is a sleeper that could become a hot topic in '92. In 1986, Congress eliminated deductions from ordinary income for real estate losses, mainly because the break had led to excessive speculation and overbuilding via tax shelters. Now, more than 300 members of the House and 40 Senators support a measure that restores deductions for full-time real estate investors, including real estate brokers and developers. And they may debate extending this relief to other investors not actively involved in the real estate industry.

■ **Intangible property.** Congress is likely to resolve a long-standing dispute between business and the Internal Revenue Service over whether acquiring companies can depreciate the value of so-called intangible assets, such as customer and subscriber lists. Until now, there has been confusion over whether intangibles may be writte off, and over what perio The House Ways & Mean Committee in Novembe passed a nonbinding resolu tion that would permit 1 year depreciation for intang bles. The plan has wid support from most indu tries, with the notable exce tion of software maker who enjoy five-year depreci tion under special IRS rules

How to pay for all this Rostenkowski wants a ta rate hike and a surtax o millionaires. Bentsen hint he would buy into capita gains tax relief but only income taxes are raised o the same people who benefi namely the wealthy. So fa White House spokesme have flatly rejected tax-rate hikes. Bu there are other ways to make the ric pay for middle-class tax relief, includin limits on deductions, surtaxes, an phaseouts of the personal exemptio Lawmakers remember that in 199 Bush said he would never raise taxe only to sign off on a $137 billion tax hik as part of the budget agreement. In th end, it's going to be tough for Bush t reject an economic-recovery packag that boasts a tax cut for most voter just because it includes new levies o the wealthiest Americans. Predicts on senior GOP Senate aide: "He's not abou to veto it six months before an election.

The other likely source of revenue i the Pentagon. The Bush Administratio has opposed buying tax cuts wit military spending reductions, a ste that would violate the budget dea Instead, Budget Director Richar G. Darman is hinting that th White House might back some lim its on the extent to which wealth retirees may enjoy benefits such a medicare. That could help pay fo tax cuts. But while spending redu tions may be good budget policy they threaten to wash out whatev er economic benefits the tax cut produce.

So, faced with an economic d lemma, Washington will almos surely go for political expedience The best election strategy will b to adopt a recovery plan that is jus enough to satisfy voters withou spooking the bond markets, whic remain ever-fearful of rising def cits. That translates into a modes quick-fix tax cut that will mean li tle for the economy.

By Howard Gleckman and Mik McNamee in Washington

. . . BUT KOSTY WANTS A MILLIONAIRES' TAX

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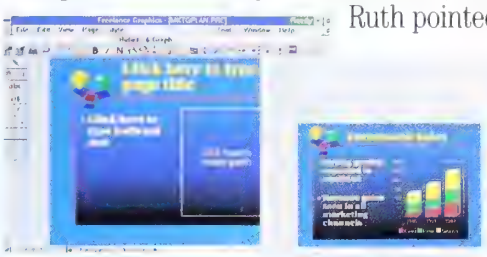

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GIVING THE BULLS THE BENEFIT OF THE DOUBT

EVEN IN THIS CLIMATE, MANY ANALYSTS ARE STICKING WITH STOCKS

Stock market investors made a bundle in 1991, but you wouldn't know it from the gloom hanging over Wall Street. Investor confidence, like consumer confidence, is waning as the economy limps along.

But the plain fact is that equity investors don't need a booming economy to make money. Today's low interest rates and low inflation provide an environment in which stocks should thrive. Even Melissa R. Brown of Prudential Securities Inc., who was wary of equities when the Dow Jones industrial average was near its high, recently joined the bulls. The Dow's shedding of 200 points and the continued decline in short-term interest rates, she says, make stocks attractive. "I'm not counting on a robust economy," says Brown, "but only that it doesn't get any worse."

"My guess is that we'll muddle through the next few months," says Hugh A. Johnson Jr., investment strategist for First Albany Corp. "What we're having is a correction, not the start of a bear market. With interest rates so low, I'm willing to give the bulls the benefit of the doubt."

LIMPING GIANTS. Hardly a ringing endorsement, but it's typical. For many, equities are the choice investment—not because they expect Corporate America to boom but because falling interest rates have driven the return on fixed-income investments so low. Short-term rates are at their lowest level in nearly two decades. Says Lonnie Whitlock, chief investment officer at Commonwealth Investment Counsel in Richmond, Va.: "When you look at the relative returns of stocks, bonds, and cash, you have to own stocks."

Few could see the case for stocks a year ago, either, when the Middle East crisis seemed to worsen the nation's economic woes. But the bulls reasoned that the Federal Reserve's easing of monetary policy and a postwar rebound in consumer confidence would fire up the economy. By early March, the Dow Jones industrial average had climbed 300 points, to 2955 (chart), and in the second half, it traded above 3000 for extended periods of time as the economy showed some sparkle. The Dow peaked at 30 in October, but it plunged in Novemb as the recovery came to a halt. Ev though the Dow has rallied back abo 2900, the market can't shake the blah More than half the investment advise polled in Wall Street surveys are bea and economists are slashing forecas for growth, too.

Bellwethers such as IBM and Gener Motors are eroding investor confiden too. Both are struggling, wounded ants. Big Blue, at 85½, is selling prices not seen since 1982. GM is clo to a four-year low. The plunge

stocks cost the Dow 140 points. e poorly performing Dow—12 of its dustrials are down for the year—is king a far stronger stock market. dard & Poor's 500-stock index is up %, 56% greater than the Dow's gain. S&P MidCap 400 index has soared %. And small companies are boom- too. Over-the-counter stocks are up % (page 72).

en the Dow seems to have found a around 2850, thanks in part to the est-rate environment. But Maceo K. n, president of NCM Capi- Ianagement Group Inc. in nam, N. C., thinks the could slide down to the 2700 range early in 1992 people move to the side- waiting to see what ident Bush will do about economy." Sloan, for one, n't think the pols will do n: "Whatever they do will nore to help their reelec- efforts than to help the omy." The market will back to life itself, he , when the economy gthens, and that should en by midyear.

ARN-BURNER. Market an- Laszlo Birinyi of Birinyi Associates es that for stocks to get rolling in the market "needs new leader- " Investors' interest has to shift from the big-cap growth stocks. cks like Wal-Mart, Merck, and Philip ris are getting a little long in the ," says Birinyi. The three have ped this year by 76%, 68%, and 38%, ectively. "But given the economy," dds, "cyclicals, technology, financial, energy stocks don't have much ap- either."

o wonder that most of the bulls are sh with a small "b." Prudential's yn looks for a modest 3150 Dow a from now. Abby Joseph Cohen, in- ment strategist for Goldman Sachs o., is shooting for a Dow of 3200. en estimates that the total return for ks during 1992 should register in the 15% range, including dividends. 's no barn-burner, but it's still above long-term average annual return equities.

By far, one of the most bullish is Shearson Lehman Brothers Inc.'s Elaine M. Garzarelli, who also was among the most upbeat a year ago. She thinks the S&P 500 can rack up price gains of 15% to 20% in 1992. "People are focusing on reported earnings, which are being distorted by the write-offs," says Garzarelli. "Earnings from continuing operations are much better, and that's what drives prices."

Indeed, hundreds of companies are taking large write-offs in the fourth quarter. The write-offs reflect restructurings or accounting changes that set aside reserves to pay for retirees' health benefits. The charges play havoc with earnings, says Kenneth S. Hackel of Systematic Financial Management Inc., but not with cash flow.

In fact, says Hackel, the relationship between stock prices and free cash flow is the most favorable since mid-1988. "In the recession, many companies showed they could deftly manage their discretionary expenses," says Hackel. Among his choices are Cray Research, Ethyl, Murphy Oil, and three beaten-up media companies—New York Times, Times Mirror, and Washington Post.

For some investment managers, the economic recovery doesn't matter all that much. Martin D. Sass of M. D. Sass Investors Services Inc. has been buying Federal-Mogul Corp., an auto-parts manufacturer. Sass says the company has improved its operations so much that it could quadruple earnings without a rebound in auto sales. Among Sass's other favorites are mutual-fund giant Dreyfus Corp. and investment brokerage A. G. Edwards & Sons Inc. Both companies, says Sass, stand to gain a lot from the boom in mutual-fund sales (page 132).

SMALL STEEL. Jeffrey B. Shames, head of equity investments at Massachusetts Financial Services, figures the economy will rebound sooner or later. And in picking stocks, he focuses on companies that have been winning market share from their competitors, such as warehouse store Costco Wholesale Corp. "They're taking sales from the discounters and from supermarkets," says Shames. Likewise, he has been buying heavy industrials, such as steelmakers Lukens Inc. and Nucor Corp., "which, with newer technology and lower costs, have been taking business from Big Steel."

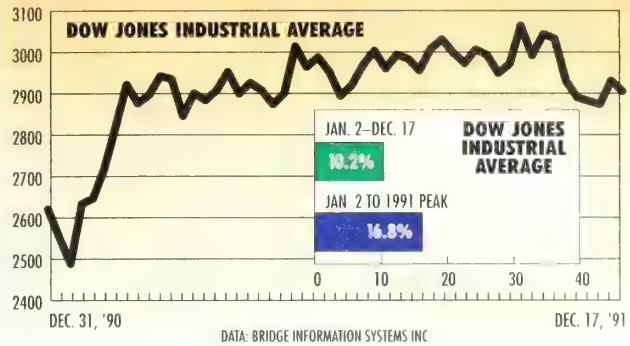
Another place to look for good opportunities is companies in battered businesses that have lowered costs to improve profitability. David R. Aushwitz, who runs the Milwaukee-based Primary Trend Fund, recommends computer maker Data General Corp. The stock ran up from 4½ to 23 this year but has pulled back to 15—and he thinks it's a steal. The company lowered its quarterly overhead from $350 million to $265 million, says Aushwitz, and with any pickup in business, earnings will soar.

A rise in business activity anytime soon? Don't rule it out. True, the Fed's monetary easing hasn't helped much yet, but that's because companies and consumers have been using lower rates to ease their debt burden, not borrow anew. Consumer spending could get a boost as homeowners refinance their mortgages. And with energy prices falling, consumers should have lower fuel bills—and more money for discretionary spending.

Indeed, investor expectations on the economy are so low that a slight better-than-expected performance from the economy could give stocks a boost that could even surprise the bulls.

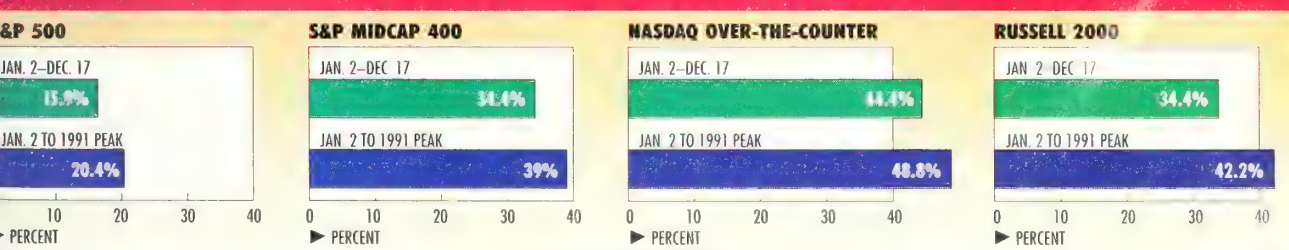
By Jeffrey M. Laderman in New York

THE DOW: A BIG LEAP, A TOUGH CLIMB, AND THEN WEAKNESS...



DATA: BRIDGE INFORMATION SYSTEMS INC

...BUT THE REST OF THE STOCK MARKET IS SHOWING BIG GAINS



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THINKING LITTLE COULD PAY OFF BIG

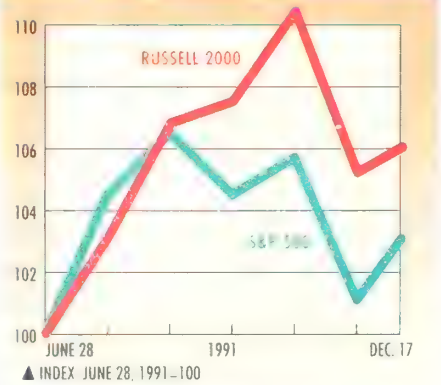
MANY ANALYSTS SEE SMALL-CAP STOCKS AS POISED FOR ANOTHER SURG

Are we entering a golden age of secondary stocks? That might seem farfetched at a time when small-capitalization stocks are still reeling from the Nov. 15 massacre. On that dreadful day, small stocks fell across the board, led by the once-mighty biotechnology issues, and were pummeled more punishingly than the Dow Jones industrial average, which fell 120 points. It seemed as if small, mostly over-the-counter issues—which climbed 34% during 1991—were headed for a prolonged stumble in 1992.

But there's a growing body of opinion that, Nov. 15 notwithstanding, stocks with under $1 billion in market capitalization are in the opening stages of a cyclical rebound. If so, that could be a repetition of the last resurgence in small-company growth stocks, which began in 1977 and concluded in 1983—just as the bull market in large stocks was getting under way. True, some overheated sectors—notably the health care and financial services stocks that have led the small-stock renaissance—may not be able to repeat their 1991 gains. But a wide range of other small-stock issues, ranging from specialty retailers to software publishers, are likely to see continued strong price increases even without a resuscitation of the economy. "We believe that emerging growth stocks are likely to continue to outperform the market into 1992," says John D. Morris, a Morgan Stanley & Co. analyst.

Among the reasons for the optimism are several technical factors. One is that the small stocks managed to turn in a strong showing during the second half of the year despite Nov. 15 (cha which broke a long-established tre For much of the past decade, for r sons that remain murky, seconda stocks have tended to glow during first half of the year but peter out the after. In 1991, true to form, the Russ 2000 index of small-cap stocks gai 27% through June 30, compared w 12% for the Standard & Poor's 500-st index. It was a spectacular performan largely fueled by strong advanc among recession-resistant biotechnolo issues. The betting among money m agers, though, was that, as usual, wouldn't last. But it did—despite Nov. 15 selloff.

LEADING THE PACK: SMALL-CAP STOCKS



▲ INDEX JUNE 28, 1991=100

DATA: BRIDGE INFORMATION SYSTEMS INC.

HOT SHORTS. Another favorable tech cal indicator is the high level of sh interest in NASDAQ-traded over-t counter stocks. In November, OTC sh positions reached a stunning $6 billi six times the level at the beginning 1988. Rampant short-selling is a sign widespread pessimism—and that's g news to contrarians.

And then there are some auspicio valuation indicators, such as the relat price-earnings ratio of the Morgan St ley index of emerging growth stocks,

pared with the S&P 500. The Morgan ley index is 1.45 times the p-e of the —at the low end of the historic e, which was as high as twice the s ratio at the end of the last small- k bonanza, in 1982 and 1983.

he small-cap thesis is bolstered by e nontechnical arguments. One is large-cap stocks have become dino- s because of unsustainably high levels, bloated payrolls, and the in- ty to adapt to changing conditions. e money managers and analysts ntain that small companies are er and better positioned to produce rth over the next year or so. Indeed, nt weeks have brought another e of layoffs and downsizings at a e of troubled large companies, with s announced intention to cut 20,000 kers over the next year being only most dramatic example. "If General ors, Ford, and so forth don't get a ime cyclical wind at their back, who be delivering the big returns?" asks e Barney, a vice-president and insti- nal money manager at the Twenti- Century Investors Inc. fund group. answer, in his view, are high-growth panies of all sizes.

deed, the lesson of 1991's small-cap rgence is that the market is willing ay high premiums for growth, par- arly at small companies. Witness the e in biotechnology stocks.

OF A REST.' But as the biotechs also , careful stock-picking is becoming easingly crucial, because the broad advances of 1991—which lifted sol- d airy stocks alike—are unlikely to epeated. With the economy unlikely how much resilience, probably the rtest course for a would-be small-cap stor is to seek out companies that withstand unfavorable economic tid- —or even thrive on them.

at's certainly the strategy being fol- d by fund manager C. Beth Cotner, e Kemper Summit Fund in Chicago. er believes that the economy will be growing slowly into the first half 992. Her largest portfolio holding is ff-price retailer, Duty Free Interna- l. Another major Summit holding is e's Basement, also an off-price re- r. In personal computers, which been characterized by ruthless e-slashing, Cotner favors software ufacturers such as Symantec, owner e popular Norton Utilities software, Broderbund, a maker of game and ational software. Price-cutting, she s, has made advanced graphics capa- es accessible to vast numbers of le—and makers of graphics-intense ware will be able to exploit that d.

ill, some managers are becoming of small stocks. Although he sub- bes to the view that secondary stocks are engaged in a long-lasting cyclical comeback, Mark Tincher, who runs $800 million in stock portfolios at Chase Manhattan Corp., notes that he is not buying small-cap stocks as aggressively as he did a year ago. "I think you're going to have a bit of a rest here," says Tincher. "I believe that there will be a bit of a correction to get the excesses out of the market."

And excesses are there, to be sure. Even small-stock aficionados agree that the burst of initial public offerings is worrisome. Large numbers of IPOs are frequently a sign of an overheated market. And Tincher, for one, is concerned that the next market correction is likely to take investors by surprise. Investors, he notes, have been conditioned to buy after a market setback—and may be in for shock if "the next air pocket is followed by another air pocket."

Such qualms are understandable. Small stocks, after all, have been disappointing large and small investors alike for nigh on eight years. But 1991 is looking more and more like a turning point—the year when the small-cap worm finally turned.

By Gary Weiss in New York

A DEFT CAPTAIN ON THE SMALL-CAP SEA

STUART ROBERTS

In his spare time, Stuart Roberts raises Connemara ponies—small but surefooted, and tough as nails. Well, pretty much the same adjectives could describe Roberts' other passion: the Montgomery Small Cap fund. By dint of some of the most agile stock-picking in the world of small-cap stocks, Roberts, 37, steered the Denver-based mutual fund to an 81% gain during the year.

Roberts' approach to money management bears a close look, now that secondary stocks are entering a potentially troublesome phase. Buying small stocks or sectors indiscriminately was a winning strategy in 1991 but is unlikely to reap powerhouse returns in the coming year. Unless the economy stages an unexpectedly strong rebound, 1992 is apt to be a more vexing period—when thorough research will prove crucial. Unlike money managers who zero in on sectors by data-base searches and other quantitative factors, Roberts is the epitome of the "bottom up" investor. His ideas come from a variety of sources—from analysts to competitors—and he and his two analysts believe in investigating companies thoroughly and personally. Observes Roberts: "You have to do your own due diligence."

BARE LINOLEUM. To get stock-buying ideas, Roberts is a habitué of the trade-show circuit and is an avid reader of professional journals. He also has wide contacts among analysts at regional brokerages, whom he has known since his days as manager of Founders group mutual funds. And Roberts likes to meet with managers of companies he has bought into, to look as well as listen. "I prefer to see steel furniture and linoleum [rather] than antique furniture and carpets," he says.

More important than executive-suite furniture is who's sitting in it—not many analysts, Roberts hopes. He keeps an eye peeled for companies that have yet to gain a following on the Street. Examples are Vigoro Industry Inc., a fertilizer manufacturer, and Sun Electric Corp., which makes automotive diagnostic equipment. He owns a diversified portfolio of 80 to 100 stocks and is quick to dump mistakes. If a stock falls 20% more than the overall market, it's history.

Like many successful stock-pickers, Roberts readily concedes that he could become history, too, if the market turned against him. "The market can be cruel," he says. And in 1992, investors are bracing for possible setbacks, despite widespread expectations for a cyclical upswing in small caps. The smartest, like Roberts, will be hewing closely to the credo that follows the old drinking aphorism. "Bottoms up!"

By Gary Weiss in New York

Christopher Co[illegible]

I'M TO GE

This is a tale of a man and a city. Because it's in Genoa, the capital of the Italian Riviera, that Christopher Columbus was born. Now, 500 years after he made history, Italy is welcoming him back home with a world - class celebration. From May 15th to August 15th 1992, Genoa will host the International Specialized Exhibition "Christopher Columbus: ships and the sea". Two fascinating themes, navigation and the sea, will be presented by many participating countries bringing together technology, ecology and culture into one spectacular vision. But there are more reasons to go to Genoa. The Exhibition will coincide with the rejuvenation of the historical city center, based on a vast project by Genoa - born Renzo Piano, one of the world's leading architects. Investing in the city's future, the restoration will give new life to the Old Harbour docks and warehouses, to which major new permanent facilities will be added. In particular, a number of important international meetings - some of them sponsored by the United Nations - will be held in the new Conference Cen-

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THE FUTURE OF THE SEA PASSES THROUGH GENOA.

RIPE YOUNG STOCKS, READY FOR THE PICKING

EXPERTS SEE MORE HIGH-QUALITY IPOs COMING TO MARKET

As the economic recovery takes hold in 1992, the market for initial public offerings (IPOs) will fare even better than it did in 1991.

Although the new-issues market sizzled in 1991, it didn't really boil over. Analysts now figure that new offerings were well below the record IPO activity seen in 1987—about $19 billion vs. $23 billion. So market skeptics who point to the surge in IPOs as an unwelcome sign of speculative buying may want to take a second look.

Robert Mescal, research analyst for new issues at the Institute for Econometric Research in Ft. Lauderdale, Fla., likes what he sees. "I still sense a lot of pent-up demand out there for new issues, particularly in health care services and equipment, pharmaceuticals, HMOs, and biotechs," says Mescal. Other areas to watch for IPO winners, he says, are technology, including the computer software makers, and retailers, particularly the "discount-store chains à la Home Depot and Wal-Mart," he says.

Mescal notes that there was a wide improvement in the quality of companies that came to market. "For the most part, we expect the 1992 crop will be as good and as interesting," he adds.

SMALL-CAP COUP. Even the cyclicals may join the IPO parade. Analysts note that there are dozens of midsize manufacturing companies that will go public just as soon as the recovery picks up steam. Robert Natale, new-issues analyst for Standard & Poor's Corp., says the cyclicals will give a boost to the overall market. "We are fairly positive about the IPO market in 1992, partly because we

believe small-cap stocks will remain in favor," he says.

Investment adviser Glenn S. Cutler, who publishes *Market Fax*, a daily market newsletter, warns that investing in IPOs requires the same kind of research and judgment that one should apply in other kinds of stock investments. For starters, says Cutler, investors shou look for a "track record of growth, co petent management, and a niche produ or service." And the stock should priced at a reasonable price-earnings tio and market capitalization, he adds

A number of IPOs that Cutler fin compelling include those that have ready fallen from their highs. Normal a hot IPO soars and then comes down a matter of days or weeks, he not "Such stocks usually become great bu when they fall," says Cutler.

STEADY CLIMB. One such IPO he likes United American Health Care, whi had come to market at $9 a share April. In two months, the stock h jumped to $12.50. While it has fall since, to about $6, Cutler believes Unit American, which provides manageme services to health maintenance organi tions, is worth about $15 a share.

Another Cutler pick is Mobley En ronmental Services, down to $8 a sha from its offering price of $11 in Septe ber. The stock climbed as high as $13. in November. Cutler said the Str "overreacted" to disappointing fourt quarter earnings, driving the stock w down. But he's impressed by Mobley management, and despite the earnin fall, Cutler expects sales to keep on r ing. So he sees earnings climbing ne year to 75¢ a share from the estimat 57¢ in 1991.

One stock that has held up quite w after its initial offering is Intervisu Books, which was priced at $3 a sha The stock, which has risen to $4. should hit $9 in the next 6 to 12 month says Cutler, who expects Intervisua

WHAT ANALYSTS LIKE IN THE HOT IPO MARKET

Stocks	IPO date	Price	High	Current price*
HOMEDCO Home health care	May 2	15	23¼	23¼
INTEGRATED CIRCUIT SYSTEMS Semiconductor chips	June 20	8¼	10	10
INTERVISUAL BOOKS Pop-up books	Dec. 4	3	4¼	4¼
LITTLE SWITZERLAND Caribbean retailer	July 18	12	17¾	13
MEDIQUIM HEALTH Medical imaging	Sept. 20	12½	13⅞	10⅛
MEDPHIS Billing for hospitals	Oct. 9	12	18¾	16
MOBLEY ENVIRONMENTAL SERVICES Waste cleanup	Sept. 25	11	13½	8
MONROE MUFFLER BRAKE Repair shops	July 30	16	17½	11
RIDDELL SPORTS Football helmets	June 27	8	9¾	8⅛
SAGE ALERTING SYSTEMS Warnings for chemical plants	Oct. 29	2⅜	3	3
UNITED AMERICAN HEALTH CARE HMO management services	Apr. 30	9	12½	6⅛

DATA: BW SURVEY, BRIDGE INFORMATION SYSTEMS INC. * As of Dec. 17

ngs to leap to 40¢ a share next year
an estimated 20¢ in 1991 and 1990's
The company produces childrens
p books and books on tape for such
mers as Walt Disney Co. and Na-
l Geographic Society.

nong retailers, an IPO that gained
attention was Little Switzerland,
operates 17 boutiques in the Ca-
an and sells luxury items including
ry, Rolex and Omega watches, and
nthal and Waterford glassware.
company went public in July when
& Country magazine spun out to
ublic 68% of its interest at $12 a
. After hitting $17.75, the stock de-
l and is now down to $13. One at-
on is Little Switzerland's handsome
profit margin on sales.

G STAR. "Little Switzerland is in a
th business," says analyst Marga-
. Gilliam of First Boston Corp., who
es the company can expand both
roduct offerings and geographical
Little Switzerland is still a small
any, says Gilliam, and it has
th potential on the order of 20%—a
that can be easily financed inter-
as the company is in a cash busi-
with practically no debt outstand-
She figures it will earn $1 per share
e year that ends Feb. 28, 1993, up
an estimated 80¢ in fiscal 1992, and
fiscal 1991.

alyst Leonard S. Yaffe of Mont-
ery Securities in San Francisco is
ng the drums for Maxum Health, a
der of mobile medical diagnostic im-
and therapeutic services to some
ospitals and 3,600 physicians in 22
s. It went public on Sept. 20 at
0 a share and jumped to nearly $14
v days after. The stock has since
ed to about $10, but Yaffe thinks it
y cheap for a company thriving in
rket that's growing at a yearly 20%
% rate. He expects Maxum to earn
a share next year—after two con-
ive years of being in the red.

ddell Sports is the rising star in the
growing market for sports equip-
. The company is the largest U. S.
facturer of football gear, including
ets and other equipment. In April,
ell entered into a five-year exclusive
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on the front center and on chin
s of each Riddell helmet worn by
players. Some pros think the stock,
ntly below the $8 offering price, is
based on Riddell's niche markets.
s true that IPOs aren't for the faint-
ed. But patient investors who can
with volatility could do well. "The
tial thing," says Mescal, is "to
what you're buying."

By Gene G. Marcial in New York

ere To Invest continues on page 124

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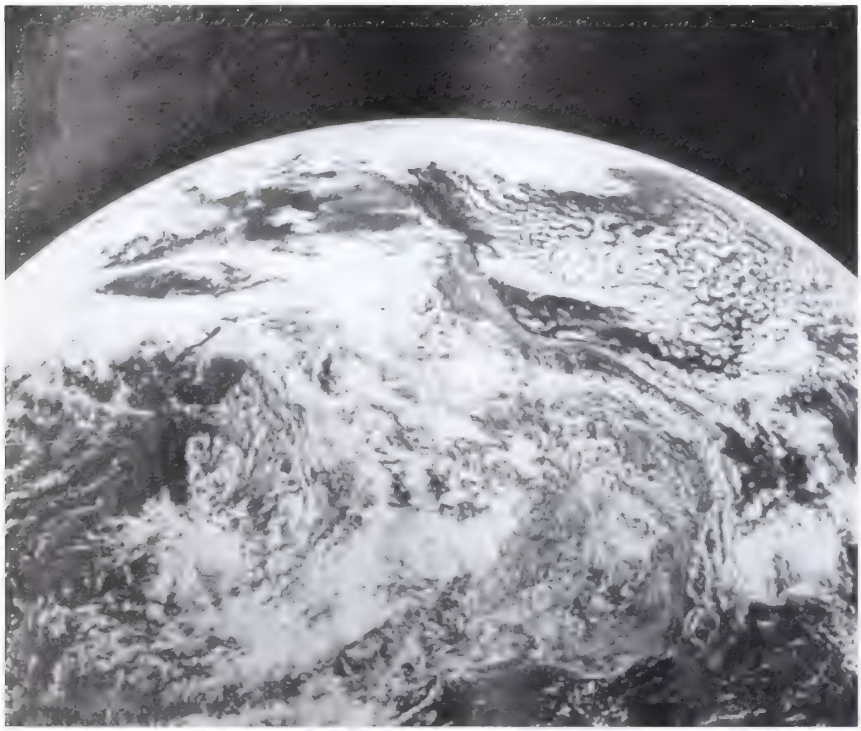
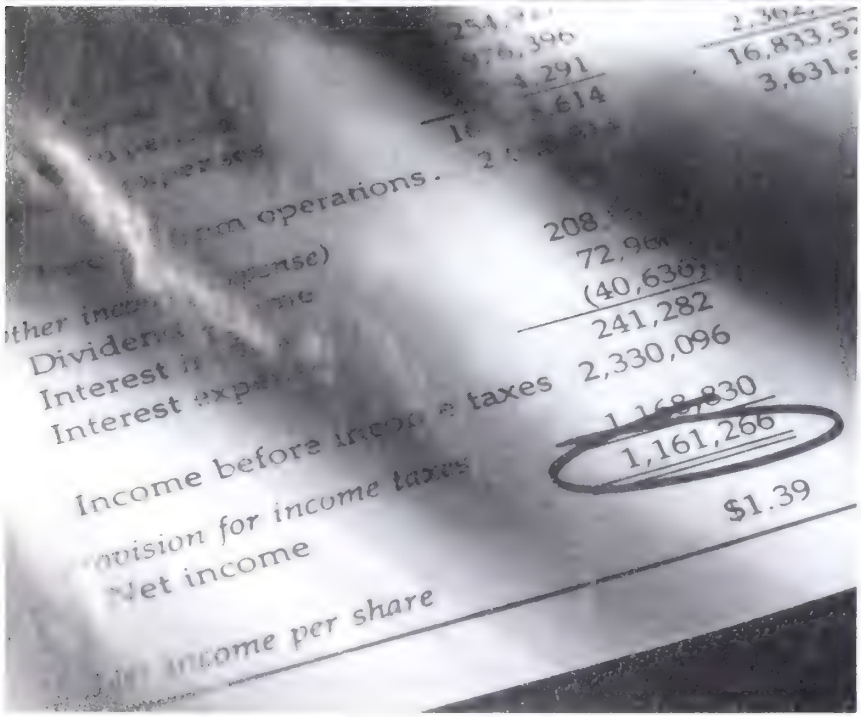
AN ENVIRONMENTAL REVOLUTION FROM TOP TO BOTTOM.





Something enlightening is taking place. A historic partnership between the federal government and America's business community to protect the environment by promoting the use of revolutionary lighting technologies that reduce pollution.

Green Lights, a voluntary corporate initiative, encourages the use of energy-efficient lighting where it is profitable and where lighting quality is improved. Through this initiative, over 150 major corporations have already agreed to reduce emissions of greenhouse gases and help curb acid rain and smog by voluntarily upgrading their lighting systems.

To learn more about the environmental benefits of energy-efficient lighting and how you and your company can profit from it, call (202) 479-6936. Or write, Green Lights, U.S. Environmental Protectio Agency, Global Change Division, 40 M St. S.W. (ANR-445), Washington D.C. 20460. The environment and your accountants can breathe a little easier.

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Last year, President Bush was the first head of state to address the United Nations Intergovernmental Panel on Climate Change. He said: "Economic growth and environmental integrity need not be contradictory priorities. One reinforces and complements the other. Strong economies allow nations to fulfill the obligations of environmental stewardship." Balancing the ethic of stewardship with the imperative of sustainable economic growth is a necessary policy investment that will benefit generations to come.

By focusing on the interdependence between our environment and the economy, the President has worked to preserve our natural heritage and to harness the genius of business to sustain and improve our environment. To cite just a few milestones, the President urged and then signed the market-oriented Clean Air Act of 1990. He has expanded America's treasury of national parks, coastal marine sanctuaries, and recreation areas. And he has made it clear that he will enforce the laws that make polluters accountable for their actions.

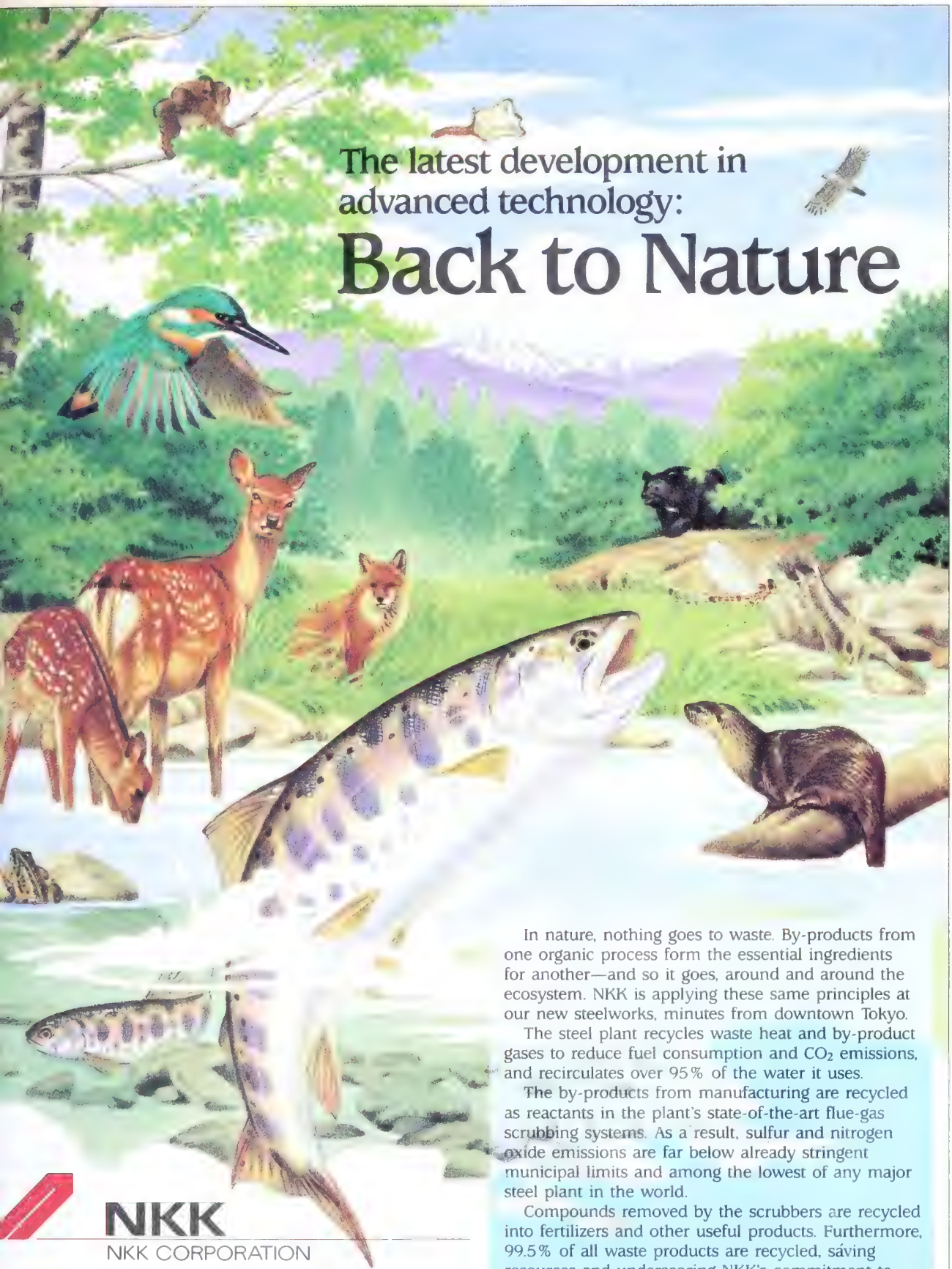
The Department of Commerce has supported the President in these efforts. The National Oceanic and Atmospheric Administration (NOAA), our largest bureau, has, for example, been working to protect marine species like dolphins and sea turtles – creatures that date from before man's time on this planet – by developing technologies to preserve them and treaties to protect them. The International Trade Administration has led environmental trade missions that have resulted in important new markets for American technologies, especially in Eastern Europe. We have been working with our counterparts in Mexico to expand our joint economic and environmental programs. And in September, the Technology Administration joined the business community in hosting, with the Department of Energy and the Environmental Protection Agency, the first in a series of conferences called "The Challenge of the Environment: New Technologies, New Market."

After the coalition victory in Operation Desert Storm, I traveled to Kuwait in the first delegation of U.S. business leaders and scientists. We were horrified by the devastation, but we also saw the opportunity for Americans to help rebuild Kuwait. Six months later, the last of over 700 fires at well heads was extinguished. Technology developed on the spot stemmed the fires a full year sooner than the experts had believed was possible.

American business people played a key role in that effort, just as they do in every other aspect of the global marketplace. At a time when the United Nations and other multilateral organizations are seeking solutions to the environmental problems we face around the world, the American private sector will supplement the efforts of government in building the partnerships that will mobilize financial resources and technical knowhow to assure a secure and healthy future for all the world's people.

The President has said: "We must protect our planet for our children and their children." The American business community is a key player in the team that is achieving cooperative, market-driven global stewardship.

Robert A. Mosbacher
Secretary of Commerce



The latest development in advanced technology:

Back to Nature

In nature, nothing goes to waste. By-products from one organic process form the essential ingredients for another—and so it goes, around and around the ecosystem. NKK is applying these same principles at our new steelworks, minutes from downtown Tokyo.

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Compounds removed by the scrubbers are recycled into fertilizers and other useful products. Furthermore, 99.5% of all waste products are recycled, saving resources and underscoring NKK's commitment to clean air and water.

"Clean and Green" industrial processes developed by NKK are showing that nature's own principles can enhance today's technology... for greater harmony with the environment.

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HOPE FOR THE FUTURE

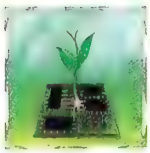
The 1990s are witnessing change at a breat less rate. The world's political map shifts dai in response to developments in Easte Europe, the Soviet Union, and Afric Economic systems barrel toward true globa ization. Nations are dismantling the nucle arsenals that darkened the latter half of th 20th century. In the face of such muscul activity, a third element — the need to pr serve the environment — has joined th political and economic forces that defi global security.

These changes pervade business-as-usua While world leaders debate whether to tak bold policy steps that will ease the pressur so overtaxing the global environment, indu try's leaders are acting to meet a dual cha lenge: the public's growing concern about th environment and unrelenting competition the world marketplace.

Some responses are prompted by regulatio and law, but many businesses are taking ste that far surpass what is required. They a reducing wastes, streamlining production, ar focusing on quality. The result? A clean environment, reduced energy use, improve efficiency, and, best of all, greater profit.

Such signs of progress are heartenin because this final decade of the century, man believe, may be our last chance to avert env ronmental damage so severe that future ge erations will be unable to meet basic requir ments for food and energy. When the 199 began, the planet was home to 5.2 billio people, and the world economy was $16 tri lion. By the middle of the next century, po ulation is expected to double, with dispropo tionate growth in developing nations, and th world economy will increase fivefold.

In most developing countries, poverty the root cause of environmental degradatio Understandably, many poor nations a expanding their industrial base so that th can raise per capita income. This growt while necessary, is certain to increase co sumption of fossil fuels, the major source greenhouse-gas emissions. Such an increa will heighten the already-troubling likeliho of global warming and climate change, as ca bon dioxide and other heat-trapping gas



GE scientists work with simulated river bottom conditions.

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those reorganizing in Eastern Europe
d the mistakes that created today's envi-
mental mess. We
d to slow and
n reverse
pollution
resource depletion while trying to meet
other long-term objective — large
eases in economic activity.

he goal is daunting, some would say
ossible. But amid the difficulty lies great
ortunity. This fact is not lost on busi-
leaders.

he articles in the following pages explore
e of the most exciting ways in which
stry is changing. More companies in the
ted States, Japan, and Europe are:

reamlining processes and reusing materi-
s, with a goal of zero wastes

rging new technologies — information,
iotechnology, and advanced materials —
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eveloping or using renewable sources of
nergy that must eventually supplant our
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dvances in renewable energy technologies
re slashing their costs, making energy
om the sun, wind, water, and plant mat-
er more competitive with traditional
ower sources.

he motives behind these developments are
truistic as concern for generations to come
as mundane as a balance sheet. Both are
d. Business leaders are increasingly aware
the earth operates as a single, unified sys-
tem — what occurs in one part can have severe repercussions in another. The effects of isolated actions such as felling a tree, irrigating a field, or dousing charcoals with lighter fluid may converge into a powerful force that translates into long-lasting degradation of the global environment: deforestation, soil erosion, and global warming.

People also are growing more resentful about the mess in their own backyards. Landfills for hazardous waste and ordinary trash are filling up, and no one wants a new one in the neighborhood. People don't like to breathe toxic fumes pumped from the local factory. These days, consumers favor companies and products with reputations for environmental responsibility, and they express their views through their billfolds, as well as with their votes.

The positive benefits of being "green" are causing the goals of environmentalists and CEOs to converge in ways undreamed of a few years ago.

Companies are taking heed. Many improvements, it turns out, can be made with technology available right now. The Office of Technology Assessment (OTA) estimates that existing technology could prevent 50% of all industrial wastes, and that research and development could do away with an additional 25%. In many cases, these solutions cost little or may even save money. Moreover, attention to environmental concerns reduces the cost of waste treatment and cleanup, liability, and penalties.

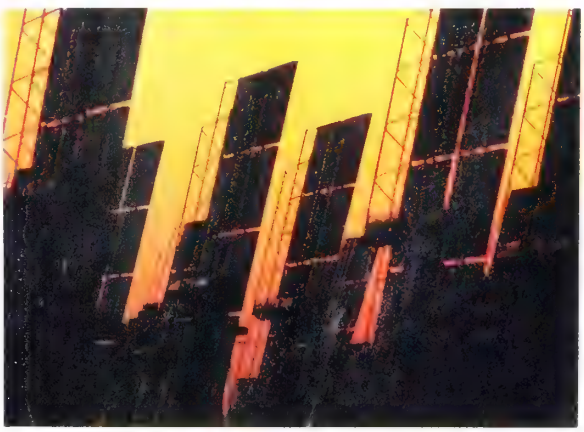
The positive benefits of being "green" are causing the goals of environmentalists and CEOs to converge in ways undreamed of a few years ago. In several instances, such as the effort to reformulate gasoline and other fuels to meet the 1990 Clean Air Act requirements, industry is helping to develop the very rules by which it is regulated.

More than 220 senior executives representing more than 15 different industries recently responded to a survey conducted by Booz, Allen & Hamilton. The proportion who believe environmental issues are "extremely important" to their company has increased threefold in the past two years. The performance of the environmental programs is mixed — largely because most of the efforts were launched within the past several years. The executives are far from satisfied and are acting to improve the way their companies manage environmental risk and opportunity.

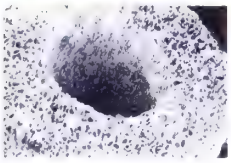
One way to do this is to integrate environmental management into the basic design of transportation and energy systems, farms, factories, and products. Taking the lead from the lean production techniques pioneered by some highly efficient Japanese firms, American companies are exploring processes that reduce labor, waste, and manufacturing defects.

The companies most successful in meeting their environmental goals are those whose top managers make a genuine, public commitment to reducing waste and increasing efficiency. Some policy changes, such as requiring prices of goods and services to reflect environmental costs, would spur the needed technological transformation. In the meantime, the government is encouraging environmentally sound practices in subtler ways — and rewarding those companies that follow

Southern California Edison's Solar Thermal Central Receiver Pilot Plant near Barstow, Calif.



Nobody cleans water better than nature.



Nature cleans her own environment. Natural waste in water provides food for microscopic organisms.
In a bioreactor equipped with a "Siran" carrier, bacteria use nature's way to clean even the most heavily contaminated industrial sewage.

Nowhere is the sea as clear and clean as around an atoll – a coral reef that acts like a giant natural sea water purification plant. The denizens of its innumerable nooks and crannies inhabit an environment which has a very simple solution to waste problems. It operates on the principle that one man's poison is another man's meat. What larger creatures reject is literally food and drink to the reef's micro-organisms and bacteria.

_____ Schott took its cue from nature when developing "Siran" carriers made of open-pored sintered glass for purifying sewage. Just like the coral reef, "Siran's" tiny pores offer bacteria a perfect environment for protection and nourishment. And the bacteria pay their way in kind. As they munch their way through even the most heavily contaminated industrial sewage they produce their own waste – valuable bio-gas.

_____ They effectively clean up the environment with a bonus for the economy.

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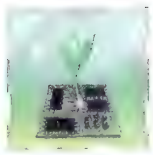


ıgh by widely publicizing the results. In
vein:
ıe Environmental Protection Agency's
ɔluntary "33/50" program so far has
spired more than 250 companies to com-
it to halving their emissions of 17 toxic
emicals by 1995.
undreds of corporations and utilities have
gned up for EPA's Green Lights program
install more energy- efficient lighting.

- The Malcolm Baldrige National Quality Award recognizes companies that instill "total quality" ethics in their operations, and is one of the most hotly sought honors in American business.

The changes described here are in their early stages. Most companies still adhere to outmoded philosophies and production methods, and of those trying to revamp their companies, many find the going rough. But from giants like Dow, Monsanto, and Ford to innovative startups, change is in the works. They find they can do more with less, and make money to boot.

The technological transformation detailed in this section carries the seeds of a second industrial revolution. How will the world look as the new century begins? More crowded perhaps, but cleaner, more secure, safer, and certainly more promising.

The First Earth Summit

by Maurice Strong, Secretary General, The U. N. Conference on Environment & Development

t has become increasingly evident that the patterns of economic growth that have produced such unprecedented levels of wealth in industrialized countries are not sustainable either environmental or economic terms. growth" is not an acceptable option. But growth" is precisely what we will get if current wasteful and environmentally destructive vth practices persist.

or economic growth to continue, industrial- countries must take the lead in effecting or shifts in economic behavior and in pat- s of production and consumption. They e created and have been the principal bene- ries of the current growth model, which has n rise to growing risks to human survival and well-being ch rich and poor alike must bear.

we accounted realistically for current growth practices, it ld be clear that much of the wealth they produce really rep- nts a running down of the earth's natural capital. This sim- cannot continue. Like any business that fails to provide for reciation, amortization, and maintenance, Earth Inc. is er liquidation headed towards bankruptcy.

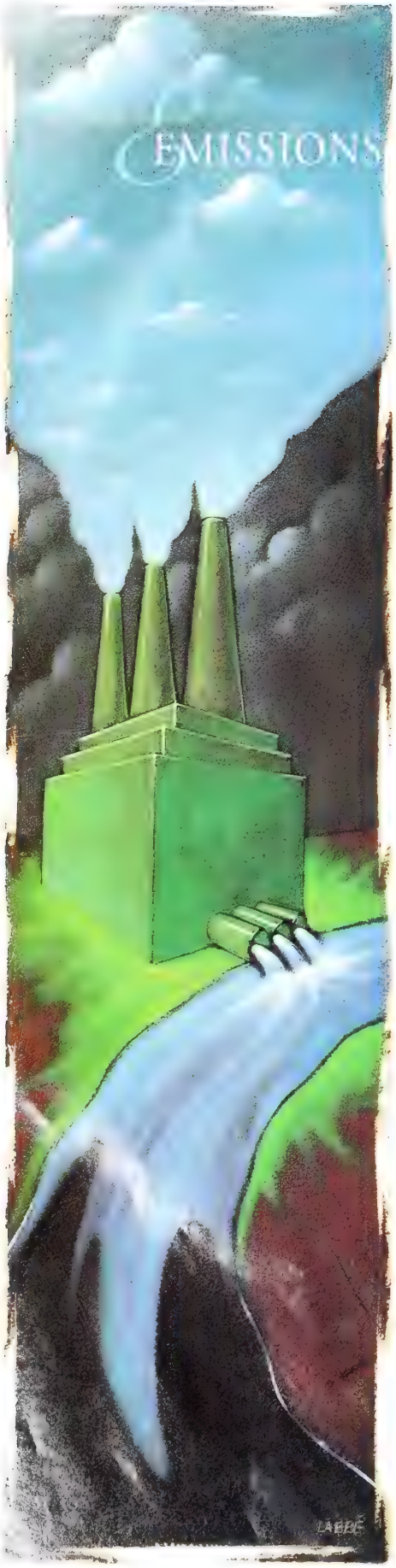
is for these reasons that leaders of the world, when they ler in Rio de Janeiro in June, 1992, for the Earth Summit, have before them a series of measures designed to effect a damental shift in our economic life and in the underlying ors that motivate it. They would move the world commun- onto a new growth pathway that is sound and sustainable in n environmental and economic terms. Technology is an spensable key to this transition.

Many business leaders have reacted defensively to the envi- mental challenge. Others have realized the opportunities it sents. The experience of Japan is illustrative. Through a bination of stringent regulatory standards and generous entives to its industry, Japan has succeeded in reducing nestic air and water pollution to a greater extent than any er industrialized country. At the same time, it has reduced the energy content of a unit of gross national product by about one-third and effected similar reductions in raw material use. These measures have yielded for Japan a new generation of competitive advantage and has led to recognition by Japanese industry that the next major wave of industrial opportunity will be environmentally driven. This is likely to be increasingly reflected in the activities of Japanese companies internationally as Japan moves towards the kind of leadership in the environmental field that it has already achieved economically.

While industrialized countries must take the lead in making the transition to sustainability in their own societies, this will clearly not be enough to save the planet. Almost four-fifths of the people on our earth live in developing countries. There is no way we can envisage a secure and sustainable future for industrialized societies if the majority of the world's people continue to he caught up in a vicious cycle of poverty and unsustainable patterns of development. They will have neither the means nor the will to join us in protecting the future of the planet unless they have access to the capital and technologies they require to revitalize their economies on an environmentally sound basis.

This is clearly in our interest. Some of the most essential and cost-effective investments in global environmental security will be in developing countries and the environmentally devastated economies of the Soviet Union and Eastern and Central Europe, and some of the best opportunities.

Industry will be in the vanguard of the fundamental shift in direction and priorities to which the decisions of the Earth Summit are expected to give rise. No one event can be expected to do it all. But this unique gathering of world leaders in the first Earth Summit ever provides a unique opportunity to lay the foundations for the changes in our economic life which will set us on the course to a more secure, sustainable and promising future.



ZERO: PROFITS ONE

"Environmental programs that focus on the end of the pipe or the top of the stack, on cleaning up after the damage is done, are no longer adequate. We need new policies, technologies, and processes tha prevent or minimize pollution—that stop it from being created in the first place."

President George Bu
October, 1990

The conclusion is inescapable: Maintaining global economic growth without environmental compromise means developing processes that produce less pollution per unit of product. But how?

As an increasing number of U.S. industries have begun to realize, the President's challenge to stop pollution at its source rather than clean it up later offers an unprecedented opportunity to wed business and environmental goals. The reason? Pollution prevention ultimately saves money; it is good for profits as well as the environment.

DuPont's experience at its Richmond (Va.) plant is a case in point. When DuPont instituted a comprehensive waste-reduction program at this facility last year, it was motivated not only by the substantial cut in air emissions and hazardous wastes it would realize but also by the money these improvements would save, both in lower waste-disposal fees and solvent costs. Through use of new technology, process redesign, and computerized process controls, the plant reduced the hazardous waste it generated by 80%, cut chloroform emissions by 70%, and eliminated 50% of its tetrachloroethylene emissions—all while saving some $3 million a year.

While traditional approaches to pollution control—scrubbers, incinerators, filters, and other "end of the pipe" technologies—represent an add-on expense, the prevention option is based on increased process efficiency and is thus inherently thrifty. Greater process efficiency means not only less wastes, but more product per unit of raw material consumed—an equation that leads directly to a company's bottom line.

This simple economic truth is beginning t transform the American manufacturing ethi Indeed, it may well inspire the profoun transformation of global industrial practic that environmentally sustainable growt demands. It also dovetails nicely with th realization in corporate boardrooms that ev dence of environmental responsibility is requisite for business success in the '90s.

This convergence of factors has prompte a surge of corporate commitments to cu toxic emissions substantially in the sho term, with the ultimate goal of eliminatin them altogether. The list of those wit announced plans to cut emissions include some of the nation's largest manufacturer Monsanto, DuPont, 3M, and Dow, amon many others. Some 250 companies, repre senting a significant percentage of the coun try's toxics releases, have signed on to th EPA's new 33/50 program. In a significar departure from EPA's usual regulatory rol the 33/50 program calls for voluntary emi sions cuts of 33% by 1992 and 50% b 1995, with further reductions to be negot ated later.

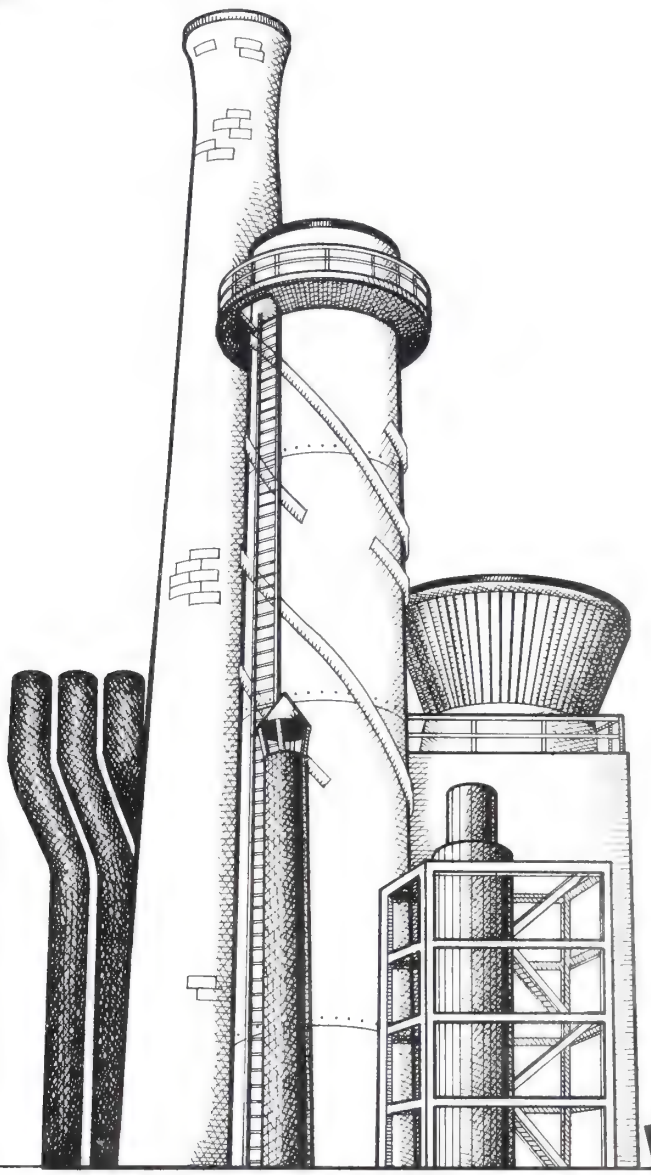
THE PRICE OF WASTE

The goal of zero emissions—or, mor properly, zero wastes—is long overdue. Wast and toxics generated in the U.S. have reache staggering proportions: The EPA estimate that some 5.7 billion pounds of toxic sub stances were released into the air or water o trucked to landfills in 1989, the last year fo which official estimates are available.

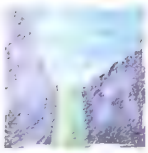
Yet this toxic output need not be nearly s massive. The congressional Office o Technology Assessment (OTA) estimated i 1986 that fully half of all industrial wast

"Smokestack" industry is the heart of American manufacturing. The problem is: How do you cut down the smoke without shutting down the stack? One of the most practical solutions is also one of the most efficient and economical. Natural gas. It's the cleanest of all fossil fuels, reducing the emission of virtually all air pollutants—CO, CO_2, NO_X, SO_2 and particulates—from roughly 30% to more than 99%, depending on the fuel replaced. Better still, it's the most efficient fuel to burn. So it can help industry meet new clean air standards—and remain competitive. Best of all, our abundant supply—plus over a million miles of pipeline to deliver it—stack the energy future in America's favor.

Thank you for not smoking.



Use natural gas. We'll all breathe easier.



outputs could be prevented with existing technology. A further 25% could probably be eliminated with some successful R&D, OTA suggested.

Moreover, managing wastes is expensive—and becoming more so, as restrictions on environmental releases tighten and cleanup costs skyrocket. Disposal fees for hazardous wastes have risen as much as 300% over the past decade alone, approaching $2,000 per ton for some wastes. The EPA estimates that each year the nation's industries and municipalities spend $120 billion to treat or contain wastes.

Worse still are the costs of potential liability for wastes that go astray. Chevron Corp. in San Francisco, for example, has set aside $750 million of before-tax reserves for future cleanup costs associated with the 140 Superfund sites it shares some responsibility for—sites contaminated with disposal practices long since discontinued but whose effects linger on.

An additional prod for industry to embrace the pollution-prevention ethic came from federal disclosure laws, effective in 1987, requiring a public accounting of all toxic

Sustainable Development – Why industry should take the lead

by Stephan Schmidheiny, Chairman
Business Council for Sustainable Development

Humanity has yet to map out paths of progress that will meet the needs of those alive today without compromising the ability of future generations to meet their needs - the basic definition of sustainable development. But such progress is sure to require an increase in production in order to satisfy the increasing needs of growing populations, particularly in the developing world.

In order to meet this challenge, production must become more resource-efficient - adding more value while using less energy and raw materials and releasing less pollution. This will require the redesign of both products and production processes, and it will require manufacturers to consider the entire life cycles of their products. Fundamental changes are needed not only in products but also in management strategy and tactics, in marketing, and in financing.

Those changes demand innovation, research, and investment. Leadership is required, and business and industry have the knowhow and research capacity, as well as human and financial resources, to provide that leadership. Industry, however, needs the right signals from the markets, in particular prices that increasingly reflect the full costs of goods and services, including the environmental costs of production, use, and recycling. Thus, business leaders must work with governments, consumers, and environmental groups to move towards sustainable development.

I have become convinced that environmental care and economic growth are neither mutually exclusive nor even antagonistic goals. In fact, the two go naturally together. It is becoming increasingly obvious that the companies with the best environmental strategies are among the most competitive, profitable, and secure, just as the nations with the best environmental strategies are among the most successful exporters.

Companies that do not look to the environment and to the needs of the future will face ever-tougher government regulations. More important, they will face increasing pressure from consumers in the marketplace. Eco-efficient companies will likely be leading in the next century and beyond, while those who go on doing business as usual have little chance to survive.

Last year, I was challenged to put these convictions of mine into action on a global scale by Maurice Strong, secretary general of the U.N. Conference on Environment & Development (Earth Summit), The summit is seeking the measures and commitments necessary to rescue the world's environment from a looming ecological and development disaster. Secretary General Strong is not engaging in hyperbole when he states: "We now face the ultimate management challenge - that of managing our own future as a species."

At Mr. Strong's request, I accepted the post as his principal adviser for business and industry. My mandate charges me to "challenge business to self-examine its performance as it applies to environmentally sound and sustainable development." Mr. Strong, himself a businessman, emphasizes his dependence on the business community to provide key ingredients in the environment and development strategies that he will put forward at the Rio de Janeiro summit.

To meet my commitments, I have sought out a wide variety of professional advice and examples. Late last year, I called upon business leaders from all continents - chairmen and CEOs from both multinational and regional companies - to form the Business Council for Sustainable Development. These executives are working to put the life and substance into the suggestions that we will then pass on to the secretary general, the summit, and the public.

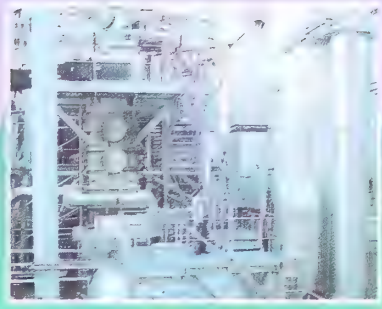
As I become more closely acquainted with the political and environmental scene, I am more convinced that business now has a unique opportunity to shape the future. Hence much of our work in the Business Council has focused on defining the essential elements that go into making an environmentally friendly, 'eco-efficient' company. At the same time, we are trying to define the practical workings of sustainable development and the overall governmental and financial framework required to encourage companies to base their operations on both economic and ecological realities.

We know that sustainable development will not come overnight, nor is it ever likely to be a steady state. Our knowledge and our needs will constantly change. Thus we must establish the fundamental principles to lead change in business and industry in the right direction. The sooner we begin, the more time we will have to learn from trial and from error, to refine and elaborate.

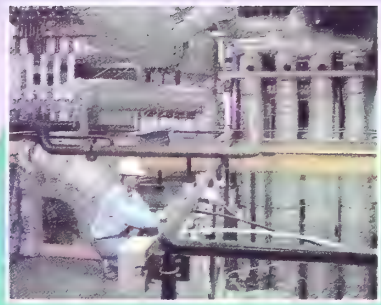
The conclusions and recommendations of the Business Council will be published next spring under the title *Changing Course - A Global Business Perspective on Development and the Environment.* The book will be available to businessmen, governments, and the public at large in several languages throughout the world. It is my sincere hope that *Changing Course* will influence business and government and will help to change the course of the world towards a more sustainable form of progress.

Clean Air and Energy Efficiency

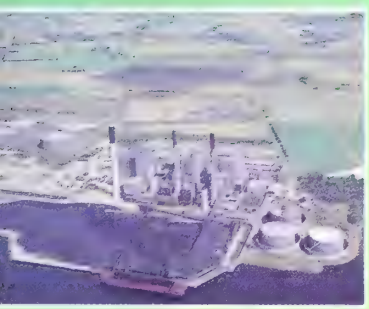
- the Topsoe Way



WSA for recovery of concentrated sulfuric acid of commercial quality from sulfurous off-gases such as flue gas from utilities, off-gases from mineral roasters, coal and oil gasifiers, viscose plants or from spent acid.



DENOX - for removal of nitrogen oxides from flue gases and other industrial off-gases.



SNOX - a process combining the WSA and DENOX processes for the efficient removal of nitrogen oxides and sulfur oxides from industrial off-gases and flue gases.

CATOX/REGENOX for removal of solvents and other combustibles (VOC's) in air and off-gases.

Clean Fuels - technologies for production of reformulated gasoline and clean diesel fuel.

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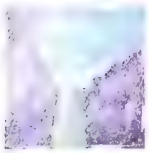


releases. A provision of the Superfund Amendments and Reauthorization Act—a clause known as SARA Title III—mandated that companies detail their releases of any of 313 listed toxic substances, whether these releases were to air, water, or landfill. While no regulatory action is associated with the required report—which is used to compile a national Toxic Release Inventory (TRI)—the TRI data provided the first public overview of industry's pollution performance and have since become a benchmark of a company's progress in cleaning up.

All along, companies had monitored their pollutant releases to comply with specific pollution-control regulations. But in most cases, the 1987 TRI represented the first time these data had been aggregated and made available to high-level management, providing an ove all picture of company emissions. In man instances, the numbers were shocking, bot to management and to the surrounding com munities.

Many companies acted rapidly to reduc SARA-tracked emissions. Convinced of th potential of preventing pollution and th costs of not doing so—both in dollars and i

Pollution Prevention — No Longer a Pipe Dream

by Frank Popoff, President and CEO
The Dow Chemical Co.

In the eyes of the public, the most compelling actions industry can take with respect to environmental protection are voluntary — not because a government regulator is holding a fine over our heads — but because we act on our own. In that regard, of all the environmental challenges we face, perhaps none presents us with more opportunities both to improve our performance and enhance our public credibility than pollution prevention.

Indeed, industry is beginning to recognize the many benefits of taking a prevention approach to emissions, rather than the traditional focus on end-of-the-pipe treatment. As a result, more and more companies are putting their technological know-how to work, significantly reducing emissions, saving money, and polishing their public images in the process.

Much is at stake. The public is skeptical of our efforts at environmental protection. Surveys show that we are not trusted. If we fail to take the initiative, the result will be a regulatory crunch that costs us — and the public — dearly without achieving significant benefits. Through pollution prevention, we can be viewed as part of the solution, not as part of the problem.

At Dow, we have long understood the advantages of reducing waste at the source. In 1986, we formalized our pollution-prevention efforts in a program called Waste Reduction Always Pays (WRAP). Our goals were simple and straightforward — to reduce waste to the environment and do so cost-effectively. We created a data base so that we could track all of our emissions and measure our progress. And perhaps most important, we sought to involve all of our employees.

The results have been impressive — both environmentally and economically. WRAP has helped us to reduce air emissions from our U.S. plants by more than 50% since 1985. Last May, in conjunction with an EPA initiative for voluntary emissions reduction, I announced a company commitment to achieve an additional 50% reduction by 1995 of all U.S. emissions to air, land, and water reportable under SARA Title III, using 1988 as the baseline year. Dow's geographic areas outside of the U.S. also have active waste and emission-reduction programs in place.

In terms of the bottom line, WRAP is proving to be an appropriate name — we are finding that waste, reduction always does pay. For example, we recognized outstanding WRAP projects this past summer at each of our five U.S. manufacturing division Combined, these five projects are resulting in an annual savings o more than $10.5 million and are reducing waste by nearly 13 million pounds a year.

The technology behind these projects ranges fro modifying computer control systems to distributin feedstocks more efficiently in our reactors. Throug our technology centers, the company's internal hu for information exchange, we are sharing our waste reduction expertise throughout the Dow world.

I know there are other companies which hav experienced similar pollution-prevention successe But just a few companies alone cannot change th performance of industry. We have to pull industr people together to seek ways to achieve better resul collectively. Last spring, I joined 40 business leade from throughout the world on the Business Council fo Sustainable Development, an organization created to develop an promote environmental goals and practices for the global busine community. I am also pleased to serve on the President's recentl appointed Commission on Environmental Quality, which include 25 representatives of industry, the environmental movement, th public-service sector, and academia. One of our major objectiv will be to address pollution prevention.

Another example of what I have in mind is Responsible Care® now being implemented by the chemical industries in the U.S Canada, Australia, and in several countries in Europe. Responsib Care is a self-help program — large companies helping smalle ones — designed to promote continuous improvement in enviro mental, health, and safety performance. Participants in the pr gram are obligated to follow a number of guiding principles an codes of management practices. One of these codes deals specif cally with pollution prevention. Among other efforts, it requir companies to establish a substantial, long-term downward trend i the amount of wastes generated and pollutants released to the env ronment.

As our technological knowhow grows, our accomplishments wi continue. We have set a goal at Dow to eliminate all wastes an emissions to the environment. While that goal may not be achie able in an absolute, it sets our direction. We will strive for contin uous improvement. It's clear that the public expects us to mak this progress. We certainly expect it of ourselves.

3M researchers work to improve product coating processes and reduce pollution.

lic goodwill—nearly every major manu-urer has embraced some type of waste-imization program or enhanced an exist-program with new resources.

his public push for lower emissions has dy borne fruit. In California's industry-se Silicon Valley, 25 of the largest manu-urers—including national powerhouses as IBM, Intel, Lockheed, Westinghouse,

llution prevention strategies are a radical departure from traditional pollution control or waste management methods.

FMC—have joined together to track advertise their progress in cutting A emissions. From 1987 to 1990, these panies, which account for more than of the area's toxic emissions, were able educe their collective toxic releases by —from 5.8 million pounds in 1987 to million pounds in 1990.

Much of this reduction stems from the eased application of traditional pollution-trol measures, but real pollution-preven-strategies also account for a significant ion of the cleanup. For instance, FMC p. cut its emissions of the toxic solvent 1 trichloroethane (TCA) by 55% from 9 to 1990 at its Santa Clara plant, where anufactures the Bradley Fighting Vehicle the military. Instead of degreasing freshly hined parts with TCA vapors, FMC now a water-based cleaning system to remove grime.

IEVING ZERO WASTE

ollution-prevention strategies are a radical arture from traditional pollution-control vaste-management methods. Typical "end-ipe" approaches use add-on technologies as scrubbers or filters to control or detox-ify pollutants without influencing the processes that produce these wastes. In contrast, pollution prevention emphasizes a "front-end" approach, where the sources of pollution in the industrial processes themselves are tackled—a tactic known as source reduction.

A natural hierarchy of preferred waste-management options flows from this fundamental difference in approach. Source reduction stands at the top as the most environmentally benign, followed by recycling and reuse of wastes, preferably direct recycling back into the process. (Off-site recycling has its own environmental risks: It is estimated that industrial recycling operations such as metal or solvent recovery operations account for 10%-20% of all Superfund sites). Various forms of waste treatment to detoxify or neutralize wastes come next, followed by disposal of what cannot be treated—the least desirable option.

In practice, opting for the high end of the hierarchy forces changes in the core elements of manufacturing. It means redesigning processes, upgrading cleaning practices and materials handling, reevaluating product design and the choice of raw materials and solvents, and modifying product packaging, loading, and transportation. A few examples illustrate how these changes have played out successfully in industry:

- ***Better materials handling and process cleanup.***

Often, one of the easiest ways to reduce emissions is to modify routine cleanup and handling procedures. At its Camarillo, (Calif.) plant, Clairol used to flush product-transfer pipes with water after making each batch of hair-care products, to avoid cross-contamination. This practice created large volumes of dilute waste water and wasted the product left in the pipes.

To reduce wastes, the company installed a system that uses air to propel a foam ball through the pipes to push the product residue out the end, where it is captured for use. Subsequent rinsing then requires much less water. The system cost $50,000 to install but saves $240,000 per year while conserving almost 400 gallons of water daily. This and other projects helped Clairol cut its total waste generation by 70% from 1985 to 1989.

- ***Reevaluating product design and raw materials.***

Sometimes, reconfiguring a product can eliminate the need for or production of toxic materials. When 3M cut round respirator masks from fabric sheets at its Aberdeen, (S.D.) plant, fully one-third of the fabric was wasted. Resin sprayed on the fabric to allow the mask to keep its shape prevented the scraps from being recycled back into the process.

Kawasaki's pilot plant is designed for environmental safety and substantial energy savings.

With support from 3M's Pollution Prevention Pays program, engineers came up with a fiber blend that holds its form without resin. This change has allowed full recycling of 300 tons of fabric scraps per year and eliminated nearly 400,000 gallons of dilute resin wastes. 3M says that since 1975, its waste reduction program has prevented the release of more than 1 billion pounds of toxics, saving the company more than $500 million.

An early return on a sound investment.

Lockheed leads.

Alaska's Prince William Sound, fouled by a massive oil spill, is coming back to life. Ensuring that natural wonders remain unspoiled is everyone's job. But at Lockheed, we've made it our business; and it's growing fast.

Lockheed has been monitoring and helping to clean up the environment for 25 years. We work on a broad spectrum of problems: hazardous waste, acid rain, ecosystem degradation and nuclear contamination. In addition to Prince William Sound, Lockheed helped clean up Love Canal; and we played a vital role in the National Acid Rain Survey.

Lockheed's vast experience with advanced technologies enables us to play a vital role in monitoring tomorrow's most critical environmental problems. As an established

Prince William Sound after the spill: slowly and relentlessly, life returns and nature recovers.

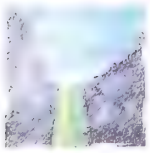
eader in this $40 billion industry, Lockheed's business is orecast to increase significantly by 1995.

Environmental Services comprises one aspect of ockheed's Technology Services Group, formed as part of ur 1989 corporate restructuring. Since then, the Group has ecorded two consecutive years of solid growth in revenues— ncreasing 8% in1990 to $1.55 billion. The Group also erforms shuttle processing, aircraft maintenance and modification, municipal services, and airport development.

Lockheed's mastery of environmental services is a perfect example of how we're leveraging traditional strengths to compete in growing markets. To some, cleaning up the environment is a dirty job. To us, it's important business.

Lockheed

Watch NOVA on PBS, Tuesdays at 8 p.m.



• ***Substituting less toxic materials.***
This strategy usually involves considerable research, since the functional properties of substitutes rarely provide an exact match with the toxic material. Cleo Wrap, a producer of wrapping paper, replaced its solvent-based printing inks with water-based inks after a six-year research effort, virtually eliminating its generation of toxic wastes and saving $35,000 annually.

• ***Instituting solvent recovery.***
Solvent use represents one of the largest sources of toxic releases in the country and thus one of the ripest areas for pollution prevention. When Polaroid Corp. introduced a new dye process in 1990, it took the time to find a substitute for toluene, the solvent that the dye process was originally designed to use. While toluene wastes would have required incineration, the substitute, trimethyl orthoacetate, is being distilled and reused, saving $500,000 a year. Polaroid's Toxic Use and Waste Reduction program has targeted and achieved a reduction of waste per unit of production of 10% per year since 1988.

The Ultimate Investment

by Lewis Preston, President
World Bank

Promoting economic development and poverty alleviation in an environmentally responsible manner is the greatest challenge we face today. Human activity, while bringing unprecedented gains in welfare, is also endangering the ability of the earth and its environmental systems to support future progress.

There are grounds for encouragement. There has been an explosion of interest in and awareness of environmental issues on the part of individuals, governments, industries, and development agencies. At the international level, the Montreal Protocol on protecting the ozone layer was a major step forward in cooperation between nations. The Global Environment Facility, launched earlier this year, has taken cooperation a stage further by providing about $1.3 billion over three years to demonstrate approaches to solving global environmental problems. Next year's U. N. Conference on Environment & Development will influence heavily the course of policy on the environmental challenges facing the world well into the 21st century. At the World Bank, the environment has become one of our highest priorities and is now fully integrated into our research, advice, and lending. Our *World Development Report 1992* will focus on the environment.

Responsible environmental management, however, will require governments to reform their economic policies by eliminating price distortions and promoting greater openness to trade and capital flows. This will also accelerate the adoption of cleaner technologies and encourage greater efficiency. Economic policies that include direct and indirect subsidies encourage the wasteful use of energy, water, and forests in developed and developing countries alike. Whether in the U.S., Eastern Europe, or Latin America, economic policies to improve energy efficiency, for example, can go a long way to improve competitiveness, improve local air quality, and reduce the threat of global warming.

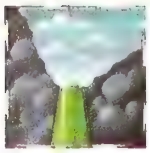
Governments will also need to set goals for environmental quality improvements and fashion targeted policies to bring about more environmentally responsible behavior. Natural environments are damaged excessively because those responsible — individuals, businesses, and government agencies — do not bear the full consequences of degradation. Clearly, environmental costs need to be internalized and environmental standards set to guide planning and to measure progress in protecting the environment.

Within this framework of economic policies and government guidance, technology has an increasingly valuable role. Technological advance and environmental protection need not be seen as antithetical. Technology can be part of the solution by increasing resource use efficiency. If the economic and regulatory framework is favorable, technology will be used more efficiently: Inputs will be different, unsuitable technology will be discarded, and better technology will be encouraged.

Many firms and governments are realizing that protecting the environment is like other investments — it costs money but provides worthwhile benefits. Companies that are environmentally more efficient also tend to be more profitable. Future technology, therefore, should be developed with an eye to preventing pollution, not simply controlling it. Future technology must also be more efficient in output per unit of raw material input. Economic growth will be harder to sustain if technology places unacceptable pressure on our planet's capacity to provide raw materials and absorb waste. We see such pressure on resources in the threat of global warming, in the rapid loss of tropical forests and in the extensive degradation of Sub-Saharan Africa's soils. The evidence is clear — natural systems' capacity to absorb waste without disruption is finite.

Energy presents technology with an especially severe challenge. Energy is one of the biggest calls on resources and one of the biggest sources of pollution. Yet energy consumption is bound to rise with economic growth, particularly in developing countries, even if conservation becomes much more prevalent, as it must. But, when the technology for saving a kilowatt is cheaper than the technology for generating it, we must invest in the energy-saving technologies. Better—and better-used—technology is indispensable to more efficient exploitation of existing energy sources and to harnessing sources such as solar, wind and geothermal power, whose potential is far from realized.

All these changes—in our patterns of growth, consumption, and economic management, government, and technology—demand a fundamental change in attitude. In an increasingly integrated world more and more must be guided by the need to avoid burdening future generations with excessive environmental costs. Technology is an intrinsic part of the sustainable development, one that can meet people's aspirations in harmony with the environment.



etter packaging, loading, and transport.

nsporting products safely to market is also me source of waste. Nalco, a producer of r treatment chemicals in Naperville, Ill., designed a very and storage em for its micals that inates the use 5-gallon drums. Porta-Feed em consists of a t of reusable less-steel con- ers in which co delivers its ducts. Nalco s up the empty container and delivers her, freeing the customer from all chemi- handling and container liability. orta-Feed containers are designed to n completely, eliminating the chemical el"—the roughly one gallon of residual nical a drum normally retains after use. co officials estimate that since its incep- in 1984, the Porta-Feed system has d about 1 million drums from disposal, enting the waste of 1 million gallons of nicals.

Reducing fugitive emissions is part of DuPont's waste minimization effort.

troducing new technology.

application of new technologies, particu- the use of computers, has begun to play rge role in pollution prevention. nputer-aided process control can greatly ease efficiency by precisely regulating the of materials, delivering the desired quan- s of reactants or energy at just the right e. Intel Corp. of Santa Clara, Calif., a roprocessor manufacturer, attributes at part of its success at reducing emissions etter process control, achieved by using wn computer chips. The company has uced its SARA-tracked wastes by 87% the past three years, even as it has under- e substantial growth.

Chevron Corp. routinely runs a device wn as a pig through its delivery pipelines crape accumulated wax and debris from sides. By adding magnetic and ultrasonic ors to the device, pipe thickness and metal loss can be detected as well, allowing replacement of weakened pipe segments before they leak. Chevron's pipeline-integrity program has reduced leaks more than 30% from 1983 to 1988.

Of course, new technology will also contribute to better pollution-control devices. Refinements in water-treatment technology, filtration devices, incinerators, and stack scrubbers have already increased the efficiency of these options, and they will undoubtedly continue to improve. The danger, experts warn, is that more widespread use of these improved technologies may yield short-term benefits but stop short of the major restructuring of industry that the prevention approach entails. Reliance on these technologies alone would then hinder the overall effort to minimize pollution.

Redesigning processes represents one of the most potent tools to reduce pollution.

A Dow facility in Germany converts sludge into biodegradable material.

• Process redesign.

Redesigning processes to avoid producing a given waste or to achieve greater process efficiency represents one of the most potent tools to reduce pollution. The investment in time and capital may be large, however, making it generally a second-generation activity, undertaken when easier options are exhausted.

IBM's San Jose (Calif.) facility was the largest single source of CFC-113 emissions in the nation in 1987, using 1.5 million pounds of the ozone-destroying compound to clean the computer disk drives produced there. High throughput and stringent cleaning requirements made finding a substitute washing process challenging. A two-year development effort yielded a water-based washing system that cleans better than the original CFC process, allowing the plant to cut its CFC emissions by 95%. Reduced solvent costs and elimination of costly air emission controls make the new system only half as expensive to operate.

Waste experts agree that the real promise of the prevention strategy will be realized only when manufacturing processes are designed from the outset on the premise of zero waste generation.

Says Ann Rappaport of Tufts University's Center for Environmental Management: "Until we start from where the product is conceived, we will only be fooling around the margins."

GETTING THERE FROM HERE

Successful pollution-prevention programs involve a firm and visible commitment by top management to the waste-prevention philosophy. The more zealous, the better. This is usually expressed through internal publications and speeches, employee briefings, company slogans, publicly proclaimed emission-reduction goals, and award programs that reward initiative and innovation in meeting environmental objectives.

When Monsanto CEO Richard Mahoney made his pledge in 1990 to cut emissions by 90% and to work toward zero emissions, he had the

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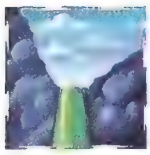


edge blown up to poster size and distribut- l to company facilities, where employees ere encouraged to sign their names to the ocument on Earth Day. In a similar vein, 3M, Dow, 3M, and many other companies ave established special environmental vards to foster increased awareness among e rank and file.

Such public displays drive home the message that pollution prevention is part of the job, and will be recognized and rewarded just like any other business effort.

Successful pollution prevention also requires proper waste tracking and accounting practices. The source and quantity of each waste stream are essential pieces of information, if these wastes are to be avoided. Unfortunately, reporting loopholes, inconsistencies, and ambiguities make SARA data a poor choice for accurately tracking releases or measuring progress, despite their wide use for just these purposes.

On the other hand, Polaroid's Environmental Accounting & Reporting System (EARS) is often cited as a waste-accounting model. EARS monitors all substances that enter Polaroid facilities, not just those that

Corporations in a Global Era

by Gaishi Hiraiwa, Chairman
Keidanren

We are entering an era that is global in a double sense: We have come to see the whole earth as a single ecosystem, and we are moving to internationalize its political ıd economic spheres in a process known as globalization. Since ıis process can only go forward if the earth mains a sound ecosystem, corporate management ust join in the concerted effort to make economic owth consistent with environmental protection. is in our interest to push for progress in fusing conomic and environmental ends at the U.N. onference on Environment & Development — ıe so-called Earth Summit— slated for Rio de neiro next June.

Global environmental problems are attracting uch attention in Japan, since people see that their ountry is well positioned to help solve them. The panese Committee for the Global Environment has been work- g since May to forge a public and private consensus in prepara- on for the U.N. conference. During a mid-summer visit to eidanren, Maurice Strong, secretary general of the Earth ummit, applauded Japanese industry's antipollution measures, lding that he hopes Japan will make a major contribution to lving global environmental problems. Mr. Strong praised our Keidanren Global Environment Charter" as an enlightened cor- orate guide that he will hold up as a model for business leaders other countries.

Japan's efforts to resolve environmental problems began as a sponse to the industrial pollution generated during the rapid conomic growth of the 1960s. High pollution levels were causing ı uproar and inviting harsh criticism of the business world, so mpanies began a full-fledged campaign to develop antipollution easures. Then the two oil crises of the 1970s struck, triggering ggressive efforts to conserve energy and diversify energy sources.

As a result, Japanese industry now has some of the world's most dvanced technologies and systems for preventing pollution, nhancing health and safety, and conserving energy and other sources. Consider, for example, sulfur and nitrogen oxides, pre- ursors of the acid rain that is damaging forests and aquatic life in orth America and Europe. Japan accounts for 80% of the orld's desulfurization and denitrification installations. On aver- ge, Japanese electric power plants discharge only one-eighth the lfur oxides and one-fifth the nitrogen oxides per kilowatt-hour of electricity generated as the average U.S., British, French, or Canadian plant. Since 1973, Japan has cut the amount of energy needed to produce a given unit of gross national product by 33%.

Still, the measures industry has thus far taken are no match for today's environmental woes. Such urban problems as garbage, gridlock, and pollution seem grave, but they pale next to ozone depletion, global warming, tropical deforestation, desertification, acid rain, and marine pollution — vast phenomena that may interact in ways that threaten the very survival of our species. Industry, rather than resting on its laurels, must capitalize on its past progress to tackle these new and increasingly complex and interconnected problems.

Governments have a major role to play, too. Japan, as the world's largest source of official development assistance, can do much to advance industrializing countries' environmental efforts. The Republic of Korea is interested in tapping Japanese knowhow to come to grips with its industrial pollution, the same sort we dealt with in the past. It's in our interest to help our East Asian neighbors clean up their industries so their pollution doesn't come down on us in the form of acid rain. Indeed, promoting the transfer of "green" technologies and antipollution expertise and the fostering of human resources among our neighbors — and the Third World in general — is a step Japan and other industrialized nations must take to ensure the preservation of the ecosystem on which their own societies depend.

Above all, we in the business world — like the public at large — must move from a nation-centered perspective to one that encompasses our planet and its vast life-support systems. We must rethink all existing social and economic systems. We must devise technologies that prevent pollution, rather than just controlling it after the fact. We must make technological breakthroughs that will allow us to create a society that conserves the environment.

Since unveiling our "Keidanren Global Environment Charter" last April, we have been asking our members to follow its guidelines. That the Charter has been well-received both at home and abroad is, I believe, a sign that society has high expectations for companies with the will, the ability, and the technology to improve the environment. The future belongs to companies that live up to those expectations.

fall under government regulation. These substances are divided into five different categories depending on their potential environmental impact. Importantly, EARS measures waste reduction per unit of production, not simply as an absolute quantity. Thus, progress from year to year can be compared, regardless of company expansion or production cutbacks.

Calculating the costs of waste is also essential to waste-reduction progress, since it places a concrete value on reduction strategies and allows their economic benefits to be quantified. Unfortunately, waste management costs are frequently hidden in overhead and must be carefully teased out if prevention strategies are to be given a fair shake.

In the initial phases of pollution prevention, most companies find that progress is surprisingly easy, with clear economic benefits. Often, analysis of a manufacturing process or a routine work procedure reveals simple changes that can lead to substantial payoffs. The more difficult waste problems often resist a quick fix, however, and require much greater investment. When a new process for making ABS plastics comes on line in 1992 at Monsanto's Muscatine (Iowa) plant, it will recycle 1.5 million pounds per year of unreacted acrylonitrile and styrene back into the process and cut emissions by 90%. Still, its cost will likely not be recovered through the substantial savings in raw materials.

Nonetheless, its benefits in improved air quality and process efficiency have assumed a definite value to Monsanto that justifies the cost. Monsanto employee Nick Redding put it this way in an article on zero waste: "The [money] we're spending to clean up air emissions is an investment in our right to operate."

Is the goal of zero emissions really possible to attain? Probably not, experts caution. Even if processes could be honed to virtually eliminate wastes—admittedly, still a distant prospect for the bulk of U.S. industry—human and technical failures would inevitably result in some toxic releases. Nonetheless, industry representatives generally view the zero-emissions target as a useful motivator—a constant reminder that the job of pollution prevention is never done.

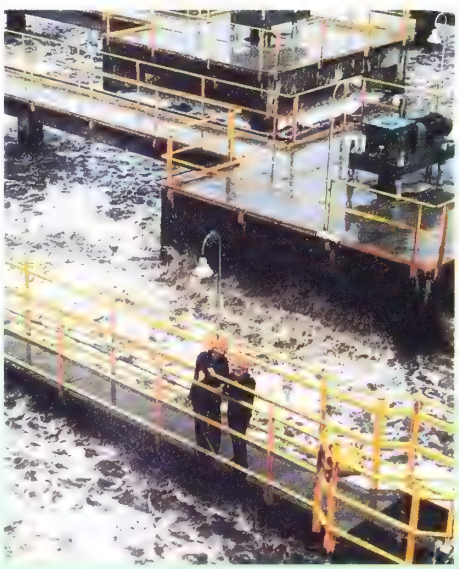
One of Waste Management System's recycling collection trucks.

"If you pursue a total quality program, the only legitimate goal is zero defects," says Monsanto spokeswoman Diane Bartolanzo. "When you have a safety program, the only acceptable goal is zero injuries. Likewise, for our environmental programs, the only legitimate goal is zero emissions."

AWARD WINNING TECHNOLOGY FOR TREATING WASTEWATER

As corporations try to reduce the amount of waste material released into the environment, they are finding that changes in treatment processes can also yield big dividends in the form of lower energy and treatment costs. Amoco Chemical Co. recently changed its process for treating wastewater from production of terephthalic acid (TA) and purified terephthalic acid (PTA). These compounds are used in everyday products such as polyester, magnetic tapes, and microfilms. But the wastewater left after manufacture of TA and PTA is acidic and must undergo an extensive and costly neutralization process before it can be discharged.

The conventional treatment system for TA and PTA production byproducts uses aerobic, or oxygen-loving, bacteria to digest the waste and break it down into harmless components. This approach is effective, but the process requires large mixers and aerators, which guzzle electricity. The aerobic bacteria also generate substantial amounts of biological solids, which must be disposed of at additional expense.



Amoco's anaerobic post-treatment of waste water.

Like other companies, Amoco knew that solid-waste handling and disposal costs would skyrocket as landfill space became scarce and environmental regulations became more stringent. In the early 1980s, Amoco scientists began to search for alternatives to the aerobic treatment process. Reports then published said that TA and PTA wastewater could not be treated anaerobically, that is, with microbes that do not require oxygen. The researchers persisted, however, and altered the process conditions and rates at which the wastes are fed to the microbes. Finally, the anaerobic bacteria were persuaded to eat the wastes.

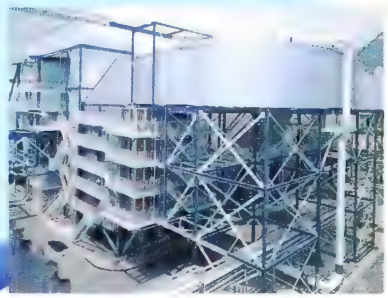
Amoco scientist Steve Ely says that lower energy costs are one clear benefit of the new process. And there are others: The microbes generate methane, which can be used in the plant's fuel system, and there is 80% less sludge left after treatment, which cuts disposal costs. In addition, the anaerobic wastewater-treatment process requires fewer nutrient additives and reduces emissions of volatile organics and foul odors to the atmosphere.

Amoco Chemical's achievement recently earned the 31st Kirkpatrick Award bestowed by *Chemical Engineering* magazine to honor outstanding advances in chemical engineering technology. The process has been instituted so far in Taiwan at the China American Petrochemical Company (CAPCO), the world's largest TA plant.

Bright 21st Century.
But Dirty, Unless...

Flue Gas Denitrification Plant/Germany

Gas Desulfurization Plant
Magnesium Gypsum
ess/Japan



Flue Gas Denitrification Plant/Japan

ry day in 1992, we'll be talking about the problem of th pollution. A large majority of people are attempting ackle this problem. Yet in many countries, environmental ution will get worse. We'll enter into a very bright v century, but it's going to be a horribly dirty one, ILESS WE ACT NOW.

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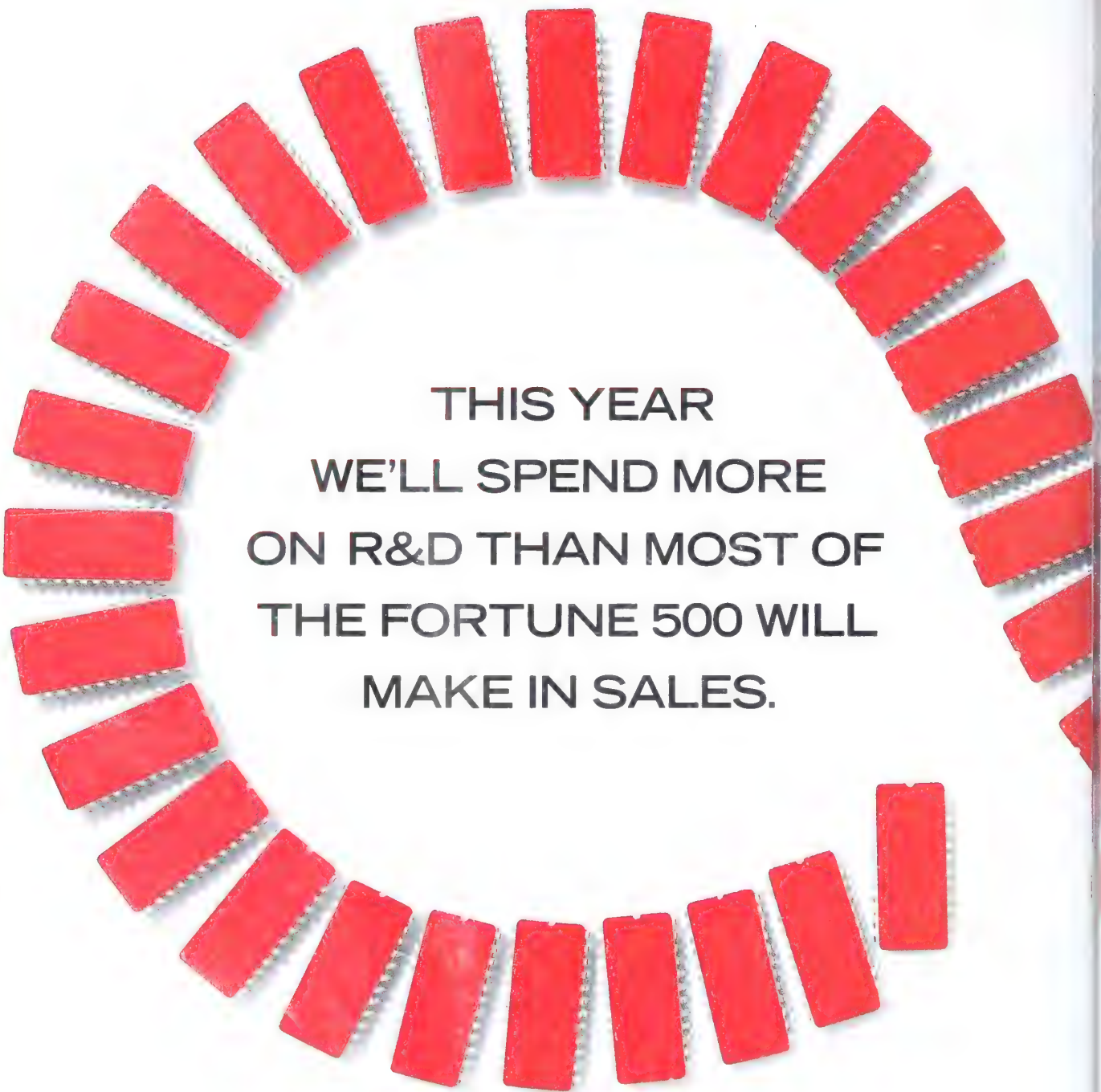

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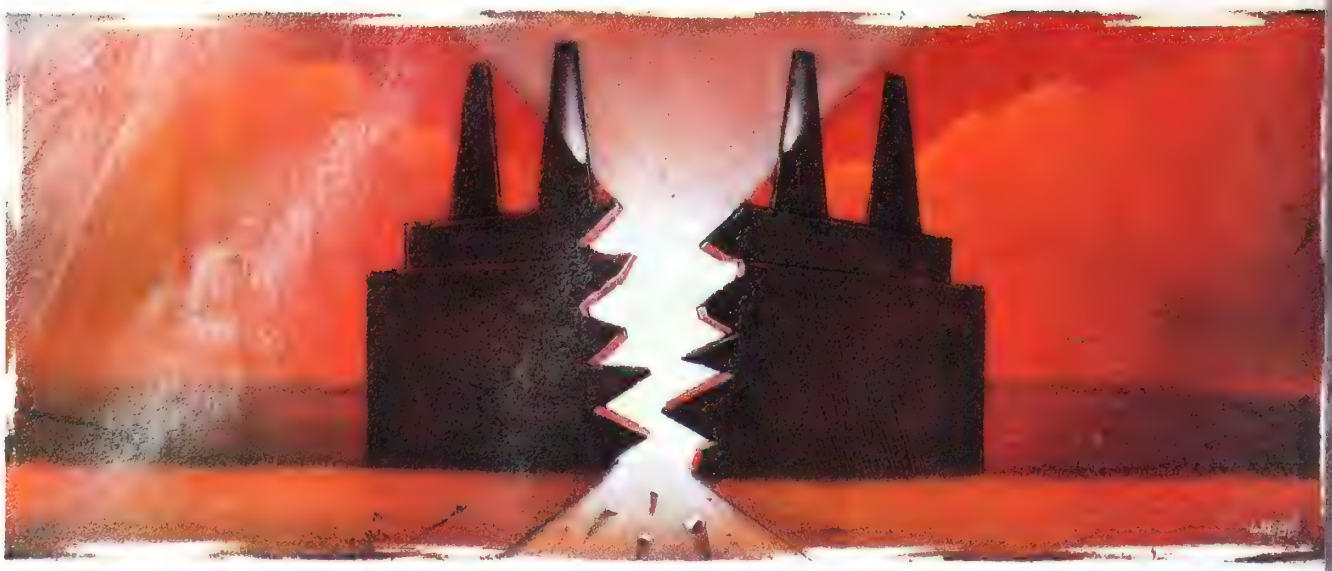

TOMORROW'S TECHNOLOGIES

Technology stoked the engines of past American economic growth and is likely to do so in the future. But the forms and impacts of tomorrow's technologies will differ dramatically from yesterday's. They will be more energy-efficient than conventional technologies, produce less waste, and contribute to the gross national product with minimal consumption of natural resources. Best of all, these emerging technologies hold vast potential for profit while sharply reducing industry's "footprint" on the environment.

This fundamental change is occurring because the brute-force technologies built on consumption of readily available natural resources such as iron, timber, and petroleum are being joined by what might be thought of as molecular technologies — substances and products literally derived from control and manipulation of molecules.

The best and most important examples of the shift are information technology, biotechnology, and advanced materials. Information technology is based on subtle manipulation of the silicon that computer chips are made of almost at a molecular level. Biotechnology is built on the direct manipulation of DNA molecules. And advanced materials, including plastic composites and ceramics, are increasingly assembled molecule by molecule.

The need for such technological innovations is clear. World population is growing at the rate of 95 million per year. It is likely to reach 10 billion by the middle of the next century, even if stringent population control measures are enacted now. As the population doubles, the $16 trillion world economy wi swell to five times its present size. Withou the development and diffusion of new tech nologies, pollution could also swell to man times its present level. Meanwhile, pollutio levels are already far too high.

The amount of pollution is determined b three factors: the number of people, th amount of economic activity (represented b GNP), and the "pollution intensity of pro duction" or amount of pollution generate per unit of GNP.

Pollution can be controlled by lowering an one of these variables. We will be lucky, how ever, to stabilize population at double today levels, and 80% of the world's population liv ing in developing countries is striving for eco nomic growth. So, the future hinges on tech nology. Not only must it change fast enoug to keep today's levels of pollution from risin but it must also reduce pollution intensit each year to balance the pollution caused b annual growth of the world's economy.

This is a tall order, but the new technol gies offer a way out of this seemingly impo sible squeeze. They allow expansion of eco nomic activity with far less pollution an fewer demands on natural resources than th low-efficiency, material-laden industries tha created many environmental problems facin the world today.

Paul E. Gray, the former president o M.I.T., sees the new technologies as a wa out of what he calls "the paradox of our tim — the mixed blessing of almost every techno logical development." The development o

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socially and environmentally responsible technologies" is not only feasible, he says, "it is the great challenge we face as engineers."

INFORMATION

Information technology is one of the world's largest and most rapidly expanding industries. It is perhaps the most advanced of the new molecular technologies, and it illustrates the kinds of gains that these technologies make possible.

The ability to handle and process information is increasing exponentially. The silicon chips that are the heart of personal computers can contain up to 1 million transistors, which in turn determine the amount of information the computers can handle and the speed at which they can process it. By the end of the decade, computer chips are expected to co tain up to 100 million transistors eac Computing power that is now only in th hands of supercomputer users will be ava able on every desktop.

Computing power will be pushed even fu ther by new parallel processing technolog which uses hundreds or thousands of chi wired together to perform numerous calcul

LESSONS FROM A HOLE IN THE SKY

by U.S. Senator John Chafee
(R - Rhode Island)

Six years ago, the world's refrigeration, electronics, and insulation industries were launched into a new era by the discovery of a seasonal "hole in the sky" – a massive drop in stratospheric ozone levels over the Southern Hemisphere, proving that chlorofluorocarbons (CFCs) destroy the ozone shield protecting earth's inhabitants from ultraviolet radiation.

Both government and industry knew of the threat since 1974 but took little action until this global crisis was discovered in late 1985. By 1987, the governments of the world produced the Montreal Protocol calling for a 50% reduction in CFC use by 1998. Shortly after the protocol was signed, new evidence showed significant ozone losses over the Northern Hemisphere, and amendments were adopted to ban CFC use and production in the industrial countries by no later than the year 2000.

When the U.S. Environmental Protection Agency (EPA) first began the search for CFC substitutes in the late 1970s, industry studies showed few alternatives to CFCs – not enough options to support even a simple freeze on CFC use at then-current levels. When the Montreal Protocol was adopted in 1987, EPA studies were showing that available options could reduce CFC use by 50% at a total cost of $5 billion by the end of the 1990s. Today, as a result of rapid innovations by companies that were dependent on CFCs, alternatives are available for virtually all uses at surprisingly low cost. It is now estimated that a complete ban may actually cost less than the original estimate for a 50% reduction. These new estimates are supported by the experiences of individual CFC users.

Considering the chorus of complaints so often aimed at environmental regulations, this is an astonishing story. The major users of CFCs are moving to alternatives far more swiftly than government regulations require and often finding that they save money or improve their products by making the transition.

Even as it becomes clear that the world can do without CFCs at a reasonable cost, another industrial revolution can be seen on the horizon, this one promising effects on the entire global economy. The continuing buildup of greenhouse gases in the atmosphere, especially carbon dioxide (CO_2), creates the potential for dramatic changes in climate, habitat, and agriculture. This new environmental threat has governments on the march again.

- In Germany, the parliament undertook a massive study of global environmental threats, publishing a 1678-page report that commits the nation to slicing global-warming pollutants by one-thi within 20 years.
- Japan has launched a "New Earth 21" program and catalogue 286 governmental initiatives as part of an action program to arre global warming.
- Less-developed nations such as Brazil have impose curbs on deforestation and implemented progra to plant millions of new trees, while others are dra tically altering their patterns of agriculture ar forestry.

The many individual, national commitments to something about global warming are expected merge into a worldwide plan of action at the Jun 1992, U.N. Conference on Environment Development (UNCED) to be held in Rio de Janei This "Earth Summit" will draw presidents and prin ministers from 140 nations. A commitment to freeze CO_2 emissio at 1990 levels beginning in the year 2000 is now supported by mu of the developed and developing world and is a likely outcome of t UNCED conference.

If, as predicted, world population doubles over the next 50 yea economic output may triple and energy use – the primary source global-warming gases – increase five fold, a freeze on carbon-dioxi emissions at current levels seems an ambitious target. But a freeze only a modest first step. Even with a freeze on yearly emissions, C concentrations in the atmosphere will continue to increase. EPA stu ies indicate that an 80% emissions reduction may be necessary to ho atmospheric concentrations of CO_2 – and global temperatures – current levels.

As this article goes to press, the U.S. government is resisting ev the modest goal of capping emissions at existing levels. That is unfo tunate. Energy conservation and production technologies are availab today to achieve that goal with little or no net cost to individu industries or the U.S. economy as a whole.

More importantly, if we look to the example of CFCs, we mig well expect that a more aggressive strategy to respond to the threat global warming can be implemented at costs much lower than curre projections. The rush of industrial innovation now replacing CF should be a lesson for us all. Those companies and countries that fa up to the challenge of global warming and press ahead with solutio now are sure to find rewards in the future they could not have predi ed. There is no reason to wait for another hole in the sky.

is simultaneously. By the end of the ade, computer makers hope to see a ercomputer capable of 1 trillion calcula- s per second. Such enormous computing er will allow advances such as simulations he human body for the testing of new gs, computers that respond easily to a e variety of spoken commands, and better ate prediction.

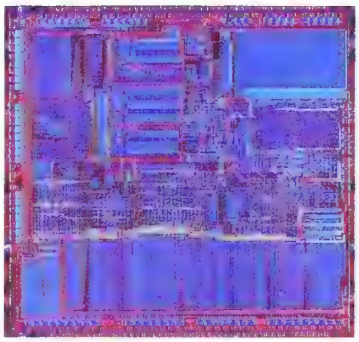
he environmental consequences of this nology are close to negligible. Silicon is of the most abundant substances on n. The value in the chips is in the electri- components etched into them, not in the erial. Chip manufacture makes little and on precious resources, and consumes ess energy per dollar of product than y industry. And while computers now sume negligible amounts of electricity, er models need less. Meanwhile, the ustry is providing jobs and wages for kers in the U.S. and abroad, expanding P without running afoul of environ- tal constraints.

ne consequence of the enormous advance ffordable computing power will be the rise new generation of small, automated fac-

primary payload aboard last September's Shuttle Discovery is the GE-built Upper Atmosphere Research Satellite.

s of the kind that often lead industry in vation, says Krishna C. Saraswat, an elec- l engineer at Stanford University.

dvances in computer hardware have also ned the door to a huge new market for ware. The Windows operating system n Microsoft Corp., which has rapidly me a standard in the personal computer ustry, takes advantage of the relatively nt generation of computers using the Intel 386 chip. That chip and its even-more-powerful successors are boosting computing power at rates that delight software designers exploiting such new applications as the combination of high-quality audio and video with conventional computers.



Computers using highly sophisticated chips require little energy.

In the first half of 1991, $2.5 billion worth of computer software was sold in the U.S. and Canada, up 16% from a year earlier. Software production provides this boost to the economy with even fewer environmental consequences than computer hardware manufacture. The only materials consumed are the bits of iron and plastic in the floppy disks the software is stored on, and the paper in the packaging and manuals. It is a prime example of what experts call dematerialization: more GNP out of less stuff.

It is a prime example of what experts call dematerialization: more GNP out of less stuff.

The explosion in computer hardware and software is being accompanied by a communications revolution that will allow much more widespread sharing of information. The U.S. government has begun construction of a nationwide fiber-optic network that will allow the transmission of high-quality video images to remote locations as easily and quickly as text is transmitted now.

The network, to be called the National Research & Education Network, will link government, industry, and universities by the mid 1990s.

BIOTECHNOLOGY

Recent advances in biotechnology, the second of the new molecular technologies, allow precise manipulation of organisms. Their potential applications promise to affect agriculture, medicine, and industry in ways that will revolutionize each of these fields.

In February, the President's Council on Competitiveness, chaired by Vice-President Dan Quayle, specified what it considered the most important growth areas in biotechnology. In its report, the council noted that biotechnology in the next decade "will produce healthier foods, safer pesticides, additional energy resources, and innovative environmental clean-up techniques." As this progress is realized, the report said, the $2 billion U.S. biotechnology industry is expected to grow to $50 billion.

Some applications are already showing great promise:

- The copper-mining industry employs the bacterium Theobacillus ferrodoxins to smelt 30% of the copper produced in the U.S.
- Genetic engineering and increased understanding of enzyme activity may ultimately lead to new classes of industrial catalysts, decreasing the chemical industry's waste production, use of fossil fuels, and energy per unit of product.
- Biotechnology may help free farmers from their reliance on pesticides and synthetic fertilizers. The need for such technologies is critical. In a survey of the nation's lakes and rivers, the Environmental Protection Agency found that agricultural run-off was the leading source of pollution.

Researchers are producing crop varieties that require fewer doses of pesticides, and are developing crops that resist insects. Genes to produce insecticides have been stitched into the genes of cotton plants to inhibit the growth and development of insects that invade cotton. The choice of cotton for these experiments could have particularly profound environmental consequences. According to Roger Beachy, head of the division of plant biology at Scripps Research Institute in La Jolla, Calif., about 40% of the insecticides used in the U.S. are used on cotton. "If you can reduce that by 90% with a single gene, the implications for

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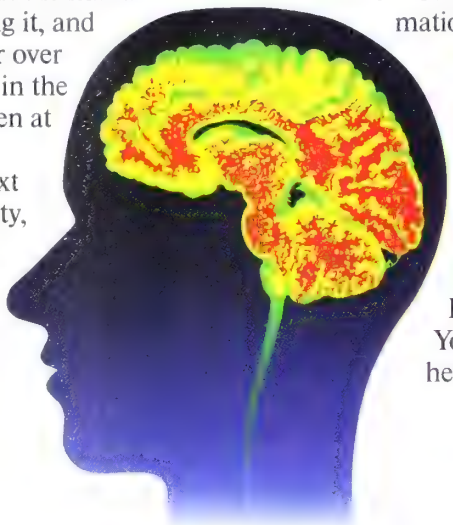
Our focus as we approach the next century, and a rapidly graying society, is the study of aging and its related disorders. Starting with the brain. Right now we're working on the causes and possible prevention of Alzheimer's disease.



You might think that this type of information is unexpected coming from Japan's largest integrated chemical company, Mitsubishi Kasei, but it's the perfect example of how we're into many different fields. In information and electronics, we're the only company that manufactures floppy, hard and optical disks. In plant genetics and agriculture, we develop disease- and insect-resistant strains and hybrids to feed a hungry world. And we make possible the continuing, vital research of the Mitsubishi Kasei Institute.

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nvironment are enormous," he says.
e cotton plants go one step beyond a of biological control of insects that has dy sprung from the biotechnology stry. The bacterium Bacillus ngiensis, which can attack up to 100 ent insect pests, has been used for years afer alternative to chemical insecticides. e experimental cotton plants were made by clipping the toxin gene from Bacillus thuringiensis and splicing it into the genes of the cotton plants. The plants thus produce their own biologically safe insecticides, eliminating the need for spraying.

Corn, cucumbers, and potatoes are also amenable to such genetic manipulation, which could lead to further reductions in the use of chemical insecticides. Over the longer term, researchers hope not only to reduce pesticide use but also to reduce fertilizer use. The aim is to equip crops with the means to produce their own fertilizers.

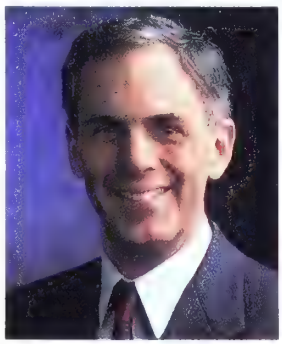
Legumes such as soybeans and alfalfa have this capacity naturally. Bacteria called rhizobia colonize the plants, absorb nitrogen from the air, and convert it into a form the plants can use as nourishment.

Electronic Utilities and the Environment: Partners for the 21st Century

by John E. Bryson, Chairman and CEO
Southern California Edison Co.

t Southern California Edison, we are seeking to achieve regional and national environmental objectives while meeting our customers' needs for reliable, reasonably priced electricity. To do e are departing from traditional utility paths.

r example, when a recent National Academy of ces report noted the accumulation of carbon dioxide (CO_2) poses a potential threat sufficient to merit ıs today, despite uncertainties about greenhouse ing. Edison was persuaded to act now to reduce emissions at little or no cost to our customers.



May, Edison and the Los Angeles Department ater & Power jointly announced that each utility ould reduce its CO_2 emissions by 10% each by ext decade, and by an additional 10% by the 2010.

is spring, Edison announced it would support gent new air-quality rules in Southern California requiring an reduction of nitrogen-oxide (NO_x) power plant emissions.

ch environmental-protection initiatives by electric utilities will ucceed if utilities are allowed to apply their experience and judg- to solving environmental problems. Environmental and utility ators should establish broad policy goals, then allow utilities to ve environmental goals in the least costly manner possible. nately, environmental issues have to compete with a multitude of rns for utilities' limited financial resources.

ison plans to take several steps to achieve these CO_2 and NO_x tions. Most important, we will expand our energy conservation ams to help customers use energy more efficiently. One of our 55 y-efficiency programs improves air quality by replacing internal- ustion motors used in agriculture and manufacturing with cleaner ic motors. Our Welcome Home Program gives residential builders tives to surpass state energy-efficiency standards for housing.

e have also given low-income customers more than 1 million free act fluorescent light bulbs, which use 75% less energy and last times as long as than conventional bulbs. Since the program's tion six years ago, these new bulbs have saved enough energy to nate 437,000 pounds of CO_2, 4,000 pounds of NO_x, and 31,000 ds of sulfur-dioxide emissions annually.

hile expanding our conservation programs will enable us to sup- nost of our future load growth, Edison will take two additional to increase generating capacity while reducing air-polluting sions. We plan to convert our older steam plants into combined-cycle systems, that use combustion turbines to generate electricity and also capture the exhaust heat to make steam that generates more electric power. These more efficient, repowered plants will reduce CO_2 emissions by 600,000 tons annually by the year 2000. We will also consider how we can increase our use of alternate and natural resources. We now provide electricity from oil, natural gas, hydroelectric, coal, nuclear, biomass, solar, wind, and geothermal. Edison will pursue cost-effective alternative and renewable technologies such as wind and solar power — in the future.

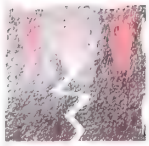
Solar power looks especially promising. Together with Texas Instruments Inc., we will develop an innovative solar cell that will convert sunlight to electricity — at about one-fifth the cost of conventional solar cells. Edison is also taking the lead in cooperating with other utilities to construct Solar Two, the most advanced solar-power plant in the world.

Edison stands committed to further developing non-polluting electric transportation too. Electric cars are 97% cleaner than the conventionally powered vehicles now operating on Southern California highways, taking into account power plant emissions and the generation resource mix available in the area. So their widespread use can significantly reduce vehicular emissions, which account for about two-thirds of the air pollution in the Los Angeles Basin.

Edison scientists are also advancing the use of electro-technologies to improve product quality while reducing air-polluting emissions. One example, ultraviolet curing, offers an energy-efficient alternative to the high-polluting, solvent-based coatings used by furniture makers, metal finishers, and printers.

Southern California Edison is not the only electric utility seeking to protect the environment. This year, about 200 U.S. utilities will spend $2 billion on about 1,300 conservation programs. The Edison Electric Institute expects these programs to "supply" 24,000 megawatts — or about 24 large power plants' worth of electricity — by the year 2000.

Protecting the environment not only improves life for electric utilities' customers; it is also sound business. Edison envisions a myriad of business opportunities arising from our commitment to clean air and sees no inherent conflict between operating a profitable business while improving the quality of life. On the contrary, the two goals enhance each other.



Most other plants cannot be colonized by rhizobia. They require nitrogen from chemical fertilizers. Researchers have recently shown, however, that they can manipulate rice, wheat, and other crops to allow colonization by rhizobia. What they have not yet shown is whether the bacteria are in fact nourishing the plants.

The advantages of these high-tech manipulations of plant and predator genes can be enhanced by a return to more environmentally sensitive farming practices. Combining technologies for natural pest-management with biotechnology has "tremendous implications for the environment," says Beachy.

The GE Research and Development Center on the Hudson River near Fort Edward, N.Y.

Biotechnology's impact on the environment is also being felt in the treatment and disposal of dangerous wastes. In the technology known as bioremediation, microbes are used to digest and break down harmful waste products.

Biotechnology's impact is also being felt in the disposal of dangerous wastes.

General Electric Co. is experimenting with the use of microbes to break down highly toxic PCBs, used as insulators in electrical equipment. Microbes were also used in Alaska to break down crude oil after the 11 million-gallon spill from the Exxon Valdez, with encouraging results, according to the congressional Office of Technology Assessment, which issued a report on the experiment in 1991.

Bioremediation takes a bit longer than conventional cleanup technologies, but its environmental advantages are matched by economic advantages: It is cheaper than conventional cleanup technology, says Harvey Price, director of the Applied Biotreatment Assn.

Most of the microbes now used commercially are naturally occurring organisms. The future points to genetically engineered organisms designed to have enhanced appetites for oil and other pollutants.

In an entirely different use of biotechnology, researchers are discovering that biodegradable waste can be converted into ethanol for use in fuels, reducing comsumption of fossil fuels. It has been controversial because of concerns that distilling ethanol from corn might actually consume more energy than the resulting ethanol could produce.

But the production of ethanol from garbage overcomes those limitations by using an already available source material. At the same time, it would reduce the quantity of solid wastes, says Lee R. Lynd of Dartmouth College.

A variety of other, more exotic biotechnologies are under development, including some that incorporate elements of computer technology as well as biotechnology.

Garry Rechnitz, director of the Hawaii Biosensor Laboratory at the University of Hawaii, is using tiny hairs from crayfish to produce exquisitely sensitive pollution detectors. "We employ the sensing hairs from these crayfish, join them with an electronic pickup device, and use them to detect and measure toxins at very, very low levels," Rechnitz says. Toxins can be measured at levels below one part per billion, he says.

Cultured plant cells are also being wired for use in monitoring herbicides and pesticides. Other techniques for measuring such substances use expensive, cumbersome machinery such as mass spectrographs. The biosensors depend upon sophisticated computer technology to pick out the desired signals from the jumble of electrical pulses emerging from the biological parts of the sensors, he says.

Rechnitz says such sensors might in the future be used to monitor other environmental factors, such as the rise in ultraviolet radiation accompanying the destruction of the stratospheric ozone layer.

Dow researchers work to improve plastics recycling technologies.

ADVANCED MATERIALS

The third molecular technology — advanced materials — promises to turn manufacturing on its ear. In the past, products were designed based on the constraints inherent in the materials used to make them. Automobile design, for example, was constrained by the load limits and strength-to-weight ratio of steel. Until recently, steel was the only material available for the manufacture of structural components. The incorporation of aluminum, magnesium, and other metals has given design engineers more latitude, but their latitude will be vastly expanded with the adoption of new materials.

The plastic composites and ceramics and other new hybrids offer designers the opportunity to design first — and then construct materials to meet their design specifications. Instead of materials limiting design options, product design will dictate the characteristics of the needed materials. The materials can then be constructed to meet the design challenges.

One of the most important testing grounds for the new materials will be the automobile industry, where composites and ceramics are already making inroads. Auto-

ers face huge environmental challenges. y are being constrained to reduce emis- s and increase energy efficiency at the e time that they provide for the recycla- y of their products. The new materials potentially help carmakers meet all of e goals.

ynthetic and artificial materials could have nmense impact on the environment, part- ly through dematerialization. Composites are stronger and lighter than steel, so structural demands can be met with less material. Less material usually means less pollution.

With automobiles, the impact is easy to see. Tougher, lighter materials allow the weight of cars to be reduced. That increases fuel economy, reducing emissions. In automobiles, much of the research interest focuses on reducing the weight of the engine, says Frank Field, director of the Materials Systems Laboratory at the MIT.

"Where you can really gain a huge amount is if you reduce the weight of moving parts," he says. The incorporation of new materials can allow engines to be made smaller while retaining the power of their iron-and-steel forerunners. Engineers are experimenting with

Transforming Technology: A Second Industrial Revolution

by James Gustave Speth and S. Bruce Smart, Jr.
World Resources Institute

round the world, societies are pursuing two potentially conflicting goals: a cleaner environment and sustained economic growth. What's needed to reconcile these goals is a sweeping nological transformation — essentially a second Industrial olution — that brings human impacts into balance with nature's regenera- powers.

rom the groundwater to the strato- re, pollution pervades the biosphere, aging forests, crops, and aquatic life vast regions and increasing health . In the form of ozone destroyers greenhouse gases, it even threatens etary life-support systems. We can't rd to continue down this path for omic, as well as ecological, reasons. enting pollution and stepping up energy efficiency make good nomic sense, because they make a company or an economy e competitive.

nother reason we must change course is that, apart from the ning of technology, there's no relief in sight. Human numbers xpected to almost double, to 9 billion or 10 billion, by mid-cen- and the world economy to multiply fivefold. What if the pro- ion of heat-trapping gases, industrial wastes, and other pollutants the consumption of energy, water, minerals , and other natural urces keeps pace with those growth curves? Pollution and urce consumption would skyrocket, making today's difficult lems into tomorrow's insurmountable ones.

workable future is possible only if we rapidly replace current nologies with new and greener ones — in every sector, from gy generation and transportation to manufacturing, housing, and culture. Environmental damage can't be cut down to size until pollution generated and the raw materials used per unit of output oth at bottom technological factors — decline much faster than nomic output grows. But without leadership from the internal business and technical communities, this environmental revon in technology won't happen.

Making this all-fronts technological transition will not be cer- quick, or easy. But facing up to necessary change can give nessmen, environmentalists, consumers, and governments a mon agenda and the sense that technology is part of the solu- not just part of the problem. The need to replace old stocks in the economy with new ecologically sound capital equipment and consumer durables is there for all to see. And all can make common cause in pressing for the market-based approaches and economic incentives that can be the most efficient means of bringing about change.

For corporate leaders, five imperatives stand out:

1. Make the environment your issue, not somebody else's.
2. Move beyond compliance to leadership, surpassing standards and developing the green technologies and products of the future.
3. Demand that government back the technological transformation: What's needed is more R&D for green technologies, an end to damaging subsidies, and a shift of the tax burden away from such desirable activities as earning income and investing and toward such ills as generating pollution and waste.
4. Address today's two greatest environmental needs: reducing greenhouse-gas emissions by shifting to sustainable energy strategies (particularly in industrial countries) and restoring the degraded natural-resource base (particularly in developing countries).
5. Commit your corporation to accountability: Bring outside environmental experts into your internal deliberations and institute full disclosure and independent auditing of environmental accounts.

If environmental and business leaders abandon the adversary approach of the past and forge new modes of cooperation, they can work together to design a sustainable future.

If we pursue these new approaches and partnerships, the 1990s can be a period as electrifying as the first Industrial Revolution, an era of creative ferment in which a new path to the future is staked out. Across the whole economy, we can bring the full power of modern technology to bear on the search for greener ways of doing things, for technologies far better suited than today's to the needs of the 21st century. And we can start repairing the environmental damage that is the unintended by-product of our economic development to date. If we can find the courage and vision needed to make these things happen before past mistakes get the better of us, we can leave a legacy of hope — our most important gift to the new century.

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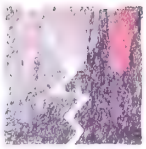

ceramic engine valves, which open and close with every up-and-down movement of an engine's pistons, making the valves among the fastest moving parts in an engine, Field says.

Ceramics have the additional advantage that they can withstand higher temperatures than steel. The basic laws of thermodynamics dictate that a hotter engine is a more efficient — and less-polluting — engine. Thus ceramic engine parts can contribute to environmental goals in two ways: by reducing engine weight and increasing engine efficiency.

Japanese auto makers are already using ceramics in commercially available turbochargers, which use exhaust heat to pump more oxygen into the engine, increasing horsepower. Turbochargers are bathed in extremely hot exhaust gases, making ceramics ideal. And the boost horsepower can translate into a reductic in fuel consumption.

A variety of other, more exotic materi may also spawn new, eco-friendly industrie The recent development of high-temperatu superconductors could lead to new electric transmission systems that would be far mo efficient than today's copper cables. An es

Free Enterprise – Technology –and a Cleaner Environment

By William K. Reilly, Administrator
U.S. Environmental Protection Agency

This past September, I traveled with President Bush to the Grand Canyon. There we announced an agreement that will significantly reduce the haze that has diminished the Canyon's magnificent vistas.

By the terms of our agreement, the Navajo Generating Plant, located 80 miles northeast of the Canyon, will install scrubbers to reduce the plant's emissions of sulfur dioxide by 90%. Importantly, the final rule will cut costs to Navajo's owners and customers below what an originally proposed rule required, at the same time achieving greater environmental benefits than the earlier proposal.

The innovative ideas that allowed EPA to issue a final rule more economically and more environmentally beneficial than our initial proposal came from a group convened by EPA, including all of the relevant parties. It was their ingenuity and collective wisdom that did it. This agreement should prove to all that we can work together toward decisions that are environmentally responsible and economically sound.

As another example, look to EPA's brokered deal on reformulated gasoline and oxygenated fuels, implementing the 1990 Clean Air Act's requirement for cleaner-burning gasoline. We recognized early on that EPA is not in the business of producing gasoline or of manufacturing automobiles. In other words, if this goal was to be met, regulated industry and all the relevant interests needed to be involved. And so we decided to try a negotiated rule-making process, inviting 30 parties, including oil and automobile industry executives, environmentalists, and citizen groups, to come to the bargaining table.

After three months of negotiation, the parties reached a compromise. By its terms, a reformulated, cleaner gasoline will be sold in our nine dirtiest cities by 1995, reducing smog-producing volatile organic compound (VOC) emissions in these cities by almost 300 million pounds per year. The compromise further assures flexibility: It allows oil companies to meet the new standards through a variety of reformulations and even awards credits to these companies for gasoline that exceeds the standards.

Here we saw a profound new dynamic: Industry actually participating in developing the ground rules by which it is to be regulated. The Bush Administration is inspired by the success of this fuels agreement, as we are inspired by the opportunities for future negotiations.

Recently, I took the process a step further by engaging industry directly in nonregulatory initiatives to prevent pollution. Consid the success of a program we call 33/50.

This past January, I wrote to the CEOs of 600 large industri companies. I asked them to reduce their emissions of 17 high-prio ity toxic chemicals voluntarily: one-third by 199 one-half by 1995. The response of these executives encouraging.

After just a few months, we are seeing specif numerical commitments from over 300 companie for reductions of over 250 million pounds in releas of our targeted chemicals. Many companies comm ted to go beyond the requests I made to them.

Similar success continues to greet EPA's "Gre Lights" program, another non regulatory pollutio prevention initiative begun in the last year. Gre Lights helps U.S. companies cut pollution throu energy-efficient lighting technologies.

Economists estimate that if energy-efficient lighting were us wherever profitable, electricity required for lighting could be cut half. Annual sulfur-dioxide emissions could be reduced by 7% the national total. Nitrogen-oxide emissions could be reduced 4%. Carbon-dioxide emissions could be reduced by over 200 m lion tons — the equivalent output of 42 million cars, or one-thi of all cars on the road.

Over 300 corporations and utilities and five states are now board with Green Lights, including nearly 10% of the Fortune 50 They are inspired by a program that has no down side: preventi pollution and increasing profits.

Green Lights, 33/50, and other such initiatives fulfill a very sir ple pollution-prevention equation: proven technologies plus low costs — plus less pollution — equals efficiency, equals competitiv ness, equals success.

I was reading the other day about a leading auto maker's ongoi effort to design an electric car, one burning no oil and emitting ze pollution. One member of the car's design team referred to their qu as consistent with the best tradition of American enterprise: a vision dreamers who "imagine the impossible and go about to do it."

Ingenuity — technology — and progress: these are essential b products of American free enterprise that we in the Bu Administration seek to unleash, enlisting them to protect the nat ral resources on which all human activity, economic activ included, depends.

Whose world is this anyway?

It's a simple, but universal truth: The world is only ours to borrow.

At Amoco Chemical, understanding this reality has created an environmental culture that has ed to new ways of operating.

Our waste-reduction efforts.

The company began by setting for itself a worldwide goal to eliminate all hazardous waste. An exceptional goal for a chemical manufacturer.

Yet by 1990, we were able to achieve an 87% reduction from just seven years earlier.

More recently, Amoco Chemical received the coveted Kirkpatrick Award from *Chemical Engineering Magazine* for our pioneering work in environmental science. Amoco advanced the technology of anaerobic biodegradation, a waste-water treatment that uses bacteria to degrade organic chemical waste — in the absence of oxygen.

Compared to our previous method, this new process eliminates 85% of the sludge — which means far less goes to a landfill.

Our work in recycling.

Amoco was also a pioneer in plastics recycling and joined with other manufacturers in the National Polystyrene Recycling Company. NPRC regional recycling facilities are on-line or under construction in Chicago, Los Angeles, Philadelphia and San Francisco. We are a founding member of the Council for Solid Waste Solutions as well.

But these are only a few highlights from a broad range of programs the company is working on to eliminate waste, conserve energy, recycle office and plant materials, and control emissions.

We're working today, for tomorrow.

Amoco Chemical is committed to responsible care of the environment. We believe companies can no longer be content to comply with current laws and regulations that merely regulate hazardous waste disposal. We have to work toward total waste elimination.

It's good for the environment. It's good for our children and their children.

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l 15% of the nation's electrical power is ated in transmission losses. Supercon- rs have the theoretical potential to nit power with no losses. Saving even a on of that 15% could improve the a's energy efficiency enormously.

is is not a near-term technology; much ch is needed to make the new supercon- rs practical for transmission lines, and a nvestment would be required to replace xisting electrical-power network. theless, the materials illustrate the trend d molecular technologies that are competitive and less environmentally costly.

INDUSTRIAL ECOLOGY

The new technologies are not going to replace current technologies completely. But they do provide enormous incentives for businesses, and they almost certainly will help resolve the world's environmental problems. The technologies do have their drawbacks: The adoption of new materials will require the development of new recycling industries to supplement the scrap-steel recycling industry. Biotechnology poses the hazard of building new organisms that could somehow run amok once they leave the laboratory, upsetting delicate ecological balances.

Furthermore, many authorities believe that fulfilling the environmental promise of these new technologies will require new regulatory and pricing strategies that reflect the environmental costs of current methods. "Technology is not going to solve the problem by itself," says Robert Herdt, director of agricultural sciences at the Rockefeller Foundation in New York. "These things have to be complemented by policies."

ELECTRIC CARS

The severe environmental problems created by automobile emissions are spurring a transformation in America's favorite mode of transportation: the car. The traditional gas-powered auto- e emits wastes including the greenhouse-gas carbon dioxide and gen oxides, which contribute to production of photochemical Not surprisingly, the locus of change is in California, specifically os Angeles Basin, where reliance on the automobile is greater than other place in the nation, and where air quality is the worst.

e Environmental Protection Agency has ordered that the basin's ality must be restored to health by 2007. One radical way to cut emissions is to introduce cars powered by electricity. Thus, avail- of roadworthy electric vehicles in California by 1998 has been ated by law. In fact, the California Air Resources Board has ated that in 1998 2% of all cars sold in California must be Zero ions Vehicles, defined as those with no tailpipe-exhaust pollu- The ratio rises to 10% by 2003. What about generating the city needed to run such cars? Some 80% of L.A.'s electric power is produced outside the L.A. Basin. And some of that comes from nuclear plants, which generate neither carbon dioxide nor nitrogen oxides.

vo's Flexible Fuel Vehicle.

Thus environmental concerns, given teeth by force of law, have spurred a renaissance in electric-car design.

In 1990, General Motors Corp. introduced a two-passen- oncept car called the Impact. It runs on lead-acid batteries but tonishing acceleration for an electric: 0-60 mph in just eight sec- and a top speed of 75 mph. Like many electric cars, its cruising is much shorter than that of a conventional, gasoline-engine car, s battery recharging time is relatively long. The Impact will trav- out 120 miles at an average speed of 55 mph before needing eling," a battery recharge lasting between two and eight hours. executives believe the Impact will be commercially available in 994.

August [1991], the Nissan Motor Co. announced that it had produced a concept car called the FEV (for Future Electric Vehicle), which can be recharged in only 15 minutes. The current needed to recharge, however, is much greater than could be supplied by a conventional residential electrical circuit. Moreover, the cruising range between recharges is only 100 miles at 45 mph. The FEV relies on nickel-cadmium batteries, which are not only more expensive than lead-acid batteries but also pose a much greater environmental hazard because of their toxicity. No date has been set for commercial production.

GM's concept car the Impact.

The hybrid, gas-electric car avoids some of the user-unfriendly aspects of all-electrics while preserving some of their non polluting performance. A hybrid uses an internal-combustion engine to power a generator that recharges the batteries, thereby extending the driving range. The following entries are heating up the hybrid vehicle race:

- The GM HX3 concept car, a minivan, contains a gas-powered 40-kilowatt generator. Running in hybrid mode, the HX3 might achieve a 300-mile driving range. Such vehicles can run as pure electrics, or in the gas-electric mode, but not on the gasoline engine alone.
- The LA 301, being developed in Britain by International Automotive Design for a U.S. entrepreneurial group called Clean Air Transport, will have a 34-kilowatt electric generator, a four-cylinder auxiliary gas engine, and lead-acid batteries.

It will have three operating modes: pure electric, with a puny 60-mile driving range; hybrid long-range, with the internal-combustion engine constantly recharging the batteries and helping to rotate the wheels; and commute, in which a computer will interact with the owner's driving habits and select the optimum combination of gas-electric operation for the best performance coupled with low emissions. Three versions of the LA 301 may be available in the Los Angeles area within a few years.

INHERIT THE WIND

Renewable energy sources — solar, wind, hydro, and biomass — hold the greatest hope for meeting the world's energy needs because they are essentially nonpolluting. Stemming directly or indirectly from the sun's torrent of radiation, they can be infinitely replenished. Recent advances in nearly every renewable energy technology are sharply boosting their commercial appeal. In some cases, power sources once viewed as purely experimental are nearly competitive with conventional energy sources.

The world's people use about 60 times more energy than was consumed at the start of the Industrial Revolution. Roughly 78% comes from fossil fuels. Nuclear energy accounts for some 4%, and renewable sources of energy — solar, wind, hydropower, and biomass — together contribute about 18%. In the U.S., renewables account for about 10% of total energy supply; 90% of that fraction comes from hydropower.

Struggles to control and protect the world's oil reserves are an obvious source o political and economic tension.

If each nation could meet its own energ needs, the world would be a safer place. B there is another compelling reason to shift renewable energy sources. Burning of foss fuels generates carbon dioxide, one of th atmospheric greenhouse gases that trap he near the earth's surface.

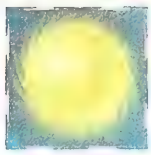
More energy-efficient technologies wi help reduce pollution and the likelihood rapid global warming, especially over the ne 20 years. But in the long run, the mo promising energy sources are renewable. Th can be harnessed by turbines that conve energy from biomass and wind, photovolta cells, hydro-electric dams, and high-temper ture solar thermal collectors.

ENERGY FROM BIOMASS

Humankind has been using energy fro biomass for tens of thousands of years, fro the primitive use of wood in campfires to th sophisticated conversion of agricultural cro to fuels such as ethanol. As long as trees ar high-energy plants such as sugarcane can planted, grown, and harvested, they are co sidered sources of renewable energy. B unlike other renewables, their conversion useful forms of energy involves combustion some stage.

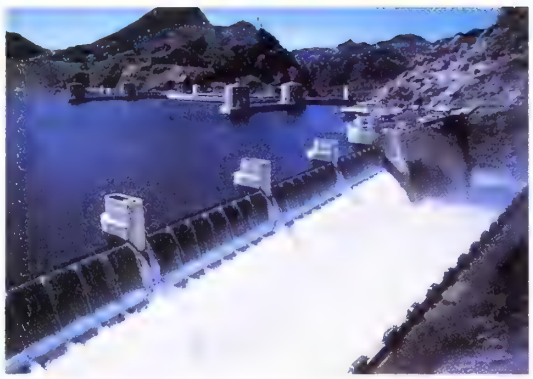
Paradoxically, although biomass-burni generates carbon dioxide, it will not enhan global warming as long as the biomass pr duced equals the amount that is burned. T carbon dioxide released by burning will ju match the amount of carbon dioxi removed from the atmosphere by photosy thesis, so that there is no net gain in gree house gas.

Princeton University's Robert Williar believes that the maximum benefit from th approach would come from displacing fos fuels with biomass such as wood chips bagasse, the waste left after sugarcane juice h been extracted. The most promising optio he says, is to adapt a technology that has be already developed for coal, called integrat gasifier/combined-cycle (IGCC), which bur fuel in gaseous form in a turbine. The ve hot gases produced spin the turbine blad generating electricity. At the same time, t lower-temperature but still hot exhaust ga



e used to make steam. This com- cycle increases the turbine's efficien- extracting more energy from the fuel a single-cycle turbine.

mass-fueled IGCC turbines operat- n a modest scale (less than 100 watts) would be more efficient than coal steam-electric power plants, ams believes, and could eventually ete in cost with electricity from nuclear, or hydropower.



The Hoover Dam Spillway near Las Vegas.

POWER

e attraction of wind power is that its does not have to be planted and har- l or dug from the ground. It is as free as d has been freely tapped from ancient . Now, advanced wind technologies such great potential that they could in y supply far more electricity than the presently requires.

ese advances have been hard won se of the quality by which wind is ed: changeability. Wind conditions not vary enormously with location, but in iven place the wind is inconstant. That ses serious constraints on the wind tur- used to convert air's kinetic energy into icity.

st wind turbines are multibladed, hori- l-axis machines that look like huge air- propellers mounted on a tower. It is cularly difficult to design a turbine's blades and mechanical-electrical equip- to ensure maximum tion of energy under varying wind condi- Early machines suf- from inefficient per- ance and blade or r failure in high .

any technical prob- were overcome in the s, however, and dur- nat time some 1,660 watts of electrical city from wind tur- was installed world- . About 85% now te in California, gen- ng more than 1% of ate's electricity needs, from more than 15,000 machines. The biggest concentration is at Altamont Pass near Palm Springs, where some 7,500 bestride the landscape looking like H. G. Wells's martian invaders.

Much of this "wind boom" was stimulated by government tax credits and guaranteed high energy prices paid by the utilities for the wind-power-generated electricity feeding into their grids. These incentives have lapsed, but wind power in California has continued to grow, albeit at a slower pace.

The cost of wind-generated electricity is only a tenth what it was a decade ago.

"A lot of people thought the wind-power industry would disappear once tax credits expired," says Edgar DeMeo, manager of solar energy programs for the Electric Power Research Institute (EPRI). But when they did stop in 1985 and 1986, he says, "hundreds of turbines continued to be installed, the cost of generating electricity grew more competitive with conventional resources, and as utilities noticed the successes, their interest in wind began to increase."

U.S. Windpower's prototype generator.

Indeed, the cost of wind-generated electricity is only one-tenth what it was a decade ago. Today it costs about 7¢ a kilowatt-hour in California. That is very close to being competitive with the 5¢ price of coal-generated electricity. Now, EPRI is engaged in a major cooperative effort with Pacific Gas & Electric and U.S. Windpower to develop an advanced wind turbine that will lower the cost of wind-generated electricity still more, by improving conversion efficiency.

Because wind turbines feeding a utility grid must provide alternating current with the U.S. standard of 60 cycles per second, they are designed to spin the rotor at a constant speed—faster or slower rotation would raise or lower the frequency. If the wind blows too briskly for this rotor speed, mechanical braking or feathering of the blades comes into play to control the rotation. If the wind gets too strong, the rotor stops turning altogether. But this wastes the extra energy in high winds.

Now U.S. Windpower, the largest supplier of wind-generated electricity in the world, has installed a prototype variable-speed turbine to join 7,500 others at Altamont Pass. Named 33M-VS, it has a rotor diameter of 33 meters. Sophisticated electronics, introducing a power converter between the turbine's generator and the utility line, together with advanced aerodynamic blade and tower design, should snatch energy from the wind at least 10% more efficiently than current designs. The California Wind Energy Commission believes the new turbine could generate electricity at 5.3¢ per kilowatt-hour, making it the most cost-competitive of all the solar renewable options.

U.S.Windpower may also team with Iowa-Illinois Gas & Electric Co. to develop the first major wind farms outside California — in the farmland of the Midwest, in or near Iowa — with enough turbines to generate 250 megawatts of electrical power. The U.S. Energy Department calculates that 16 states have wind-energy potential at least as great as California's.

PHOTOVOLTAICS

A process that would change sunlight to electricity with no intermediate stages, with no moving parts, is theoretically the most inviting and efficient of all. That is the promise of photovoltaic cells, (PVs). Photovoltaic cells are semiconductor

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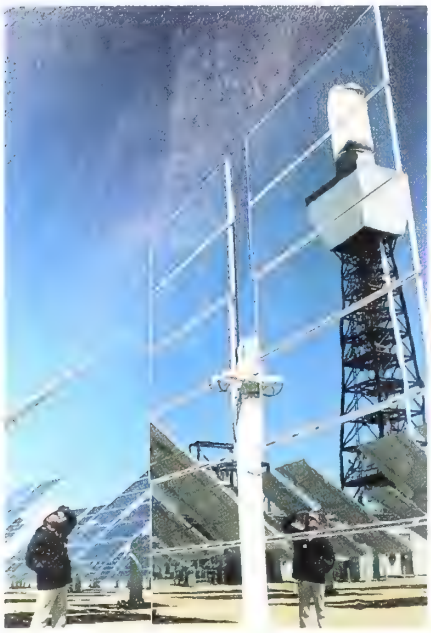


Solar panels at the Solar Two plant.

devices—the material is typically silicon—that generate an electrical current when they absorb photons (discrete particles of light).

In addition to being classically simple, photovoltaic cells are silent (unlike wind turbines), and emit no pollutants. They require little or no maintenance. They can be fabricated in virtually any size, so they are especially useful in sunny but remote areas where small portable units can supply modest amounts of power for emergency communications or lighting.

Photovoltaics is theoretically the most inviting and efficient of all.

The output of photovoltaic cells is limited almost only by space. A home in an area of average sunshine could meet its electrical needs with a photovoltaic array of 40 square meters; the entire electrical demand of the U.S. could be met by covering just 0.37 percent of its land area with PVs.

U.S. government funding for research and development of PVs was launched by the 1978 Solar Photovoltaic Research, Development, and Demonstration Act. It mandated the goal of "production of electricity from photovoltaic systems cost-competitive with utility-generated electricity from conventional sources."

The promise of photovoltaics is yet to be wholly fulfilled. The main problems with this too-good-to-believe energy source have been a low conversion efficiency, high cost of materials, and expensive manufacturing techniques. All have combined to form an obstacle to achieving a competitive price.

But technological advances have resulted in a drastic reduction in the cost of a kilowatt-hour of PV electricity: from $60 in 1970 to $1 in 1980 to something like 20¢ or 30¢ today—still averaging five times the cost of electricity from fossil-fuel sources. Early versions of crystalline silicon PVs in the 1950s had efficiencies raging from 6% to 11%. Modern commercial versions now weigh in at 11% to 14% efficiency; laboratory versions—essentially hand-built—achieve 16%. Companies such as the U.S.-based Siemens Solar Industries hope to refine crystalline-silicon-cell manufacturing techniques so that commercial modules can attain 17% efficiency.

Other avenues of research include thin-film semiconductor devices, which can make up for a somewhat lower efficiency with a manufacturing cost up to one-tenth that of crystalline silicon cells; cells made of expensive materials such as gallium arsenide, which have very high potential efficiencies—35%; and amorphous silicon cells, made of a glasslike, non crystalline form of silicon.

One unconventional PV approach was announced this year [1991] by Texas Instruments: "spheral solar" PV cells. The manufacturing process melts silicon to form tiny balls that have all impurities removed. Chemicals called dopants are added so that each sphere has a dual semiconductor nature, necessary for the photovoltaic effect to occur. Then, 17,000 of the spheres are bonded between two 4-inch-square aluminum foils. The result is a cell that Texas Instruments says has some of the advantages of thin-film cells and is far cheaper to fabricate than a crystalline cell with the same electrical output. The company has joined Southern California Edison in a joint program to develop the cells commercially.

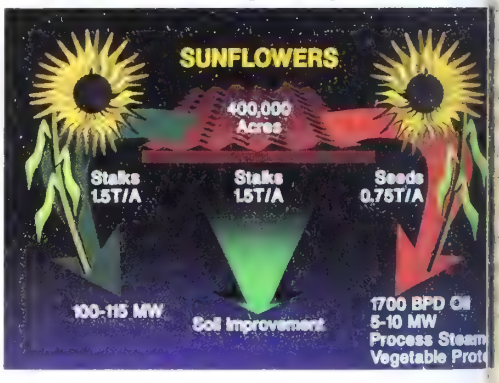
SOLAR THERMAL ELECTRIC

Surprisingly, a less direct means of tur ing sunshine into electricity has been mo successful from a cost standpoint th photovoltaics. The technology, called so thermal electric, converts solar energy in heat by focusing the sun's rays with a m ror onto a fluid. The heated fluid then bo water to create steam, which in turn driv a turbine to generate electricity. In essen the sun plays the role of coal, gas, or oil i conventional steam-turbine plant.

The LUZ Engineering Corp. now h some 354 megawatts of solar therm capacity available in California's blazi Mojave Desert. In the LUZ system, su light is concentrated by parabolic reflect troughs and focused on pipes carrying synthetic oil, which is heated to abo 700F—enough to make superheated stea for an efficient turbogenerator.

These plants now generate more th 90% of the world's solar electricity. Sand National Laboratories last Augu announced it would work with LUZ study how to reduce operating and main nance costs at the nine LUZ plants. Su costs now amount about 20% of the price solar-thermal electricity. That price, fr the newest of the LUZ plants, is only abo 10¢ per kilowatt-hour.

On Aug. 28, Southern California Ed son, the Los Angeles Department of Wa & Power, and the Sacramento Municip Utility District announced they would jo in creating an experimental solar-therm electric plant along somewhat differe lines. Called Solar Two, the plant will



Biomass diagram

lreds of sun-tracking mirrors to con-rate sunlight on molten nitrate salt ped to the top of a 300-foot tower. salt will be heated to 1,050F and d in an insulated tank until it is need-o boil water into steam to drive a tur-nerator.

ne molten salt system has been used on all scale by the Energy Dept.'s Sandia National Laboratories. The Energy Dept. will fund about half the cost of the new 100-megawatt system.

Taken together, renewable energy technologies offer a host of possibilities for the future — a future in which energy can be generated at competitive cost without the environmental burdens posed by today's energy sources. ✷

BUSINESS WEEK is pleased to present this section in cooperation with the World Resources Institute – an independent and nonpartisan policy research center in Washington, D.C. WRI's interdisciplinary staff of scientists and policy experts is backed by a network of formal advisors, collaborators, and affiliated institutions in 30 countries.

Design by Parham Santana, Inc., NYC

WASTE MANAGEMENT AND THE EVOLUTION OF HIGH TECHNOLOGY

by Dean L. Buntrock, Chairman and CEO
Waste Management Inc.

Times have probably never changed at a faster pace than they are at the present time. For those of us who provide environmental services to industry and to government, these changes sent both challenge and opportunity. Someday, we may be able cycle or, perhaps, even eliminate all waste from ation's aggregate production activity. But until day comes, we must marshal the best and the practical technology available to assure that we age our nation's waste efficiently and without ceptable levels of environmental burden.

he demand for technology and service designed prove and protect the environment will, in our ation, escalate throughout the decade of the ies and on into the 21st century. This will be ially significant for those organizations provid-comprehensive environmental services, for as national regulatory requirements become more strict in one onmental area, they are also likely to become more demanding her environmental areas as well. For example, tighter geological rements for land disposal often results in greater demand for -to-energy capacity which, in turn, generally results in stricter uality standards.

rtainly, no area of environmental service has been the focus of research and development activity than that of hazardous waste gement. Our R&D effort has yielded a wide range of valuable ologies that are, today, routinely deployed in the marketplace. xample:

HEM-MATRIX™ is Chem Waste's second-generation stabiliza-process - a method of chemically stabilizing hazardous wastes to r them harmless and suitable for disposal in a secure landfill. This ss, which can be used to treat sludges, liquids and solids, allows ndfill disposal of a wide range of otherwise "banned" materials.

TRAX® is a patented technology developed by our R&D staff. low-temperature thermal-desorption unit (this is not incinera-is designed to remove contaminants from contaminated soil at diation sites. The on-site system removes nonmetal contami-from the soil, recovers the removed organics for incineration or and returns the clean soil to the site.

)*WW*ER™ is another proprietary technology, again, devel-by our R&D people, designed to treat complex wastewaters. plex wastewaters require more than one traditional treatment od, such as precipitation followed by biological treatment (example: leachate). PO*WW*ER is a single process designed for continuous operation, which incorporates evaporation followed by catalytic oxidation. This system generates a high quality effluent which may be reused rather than discharged.

PY*ROX™ is the trademark for a series of rotary kiln incinerators for both fixed-site and on-site remediation applications. These incinerators are designed to handle a wide variety of feed material ranging from drum materials to soil.

DeChlor detoxifies PCB oils by stripping the chlorine atoms from the PCB molecule. The oil is chemically treated by reaction with a mixture of sodium and a proprietary reagent. The reaction is rapid, taking only minutes to reduce PCB concentrations to less than two parts per million. The only residual is a non-hazardous polymer.

On another front, advances in technology have made it possible to extract valuable energy resources from the natural decomposition of community solid waste. Our larger North American sanitary landfills extract, purify, and convert waste-generated biogas/methane into electricity.

Several of these specially equipped sites are producing the energy equivalent of several hundred thousand barrels of imported crude oil each year, thus reducing the nation's dependence upon imported oil.

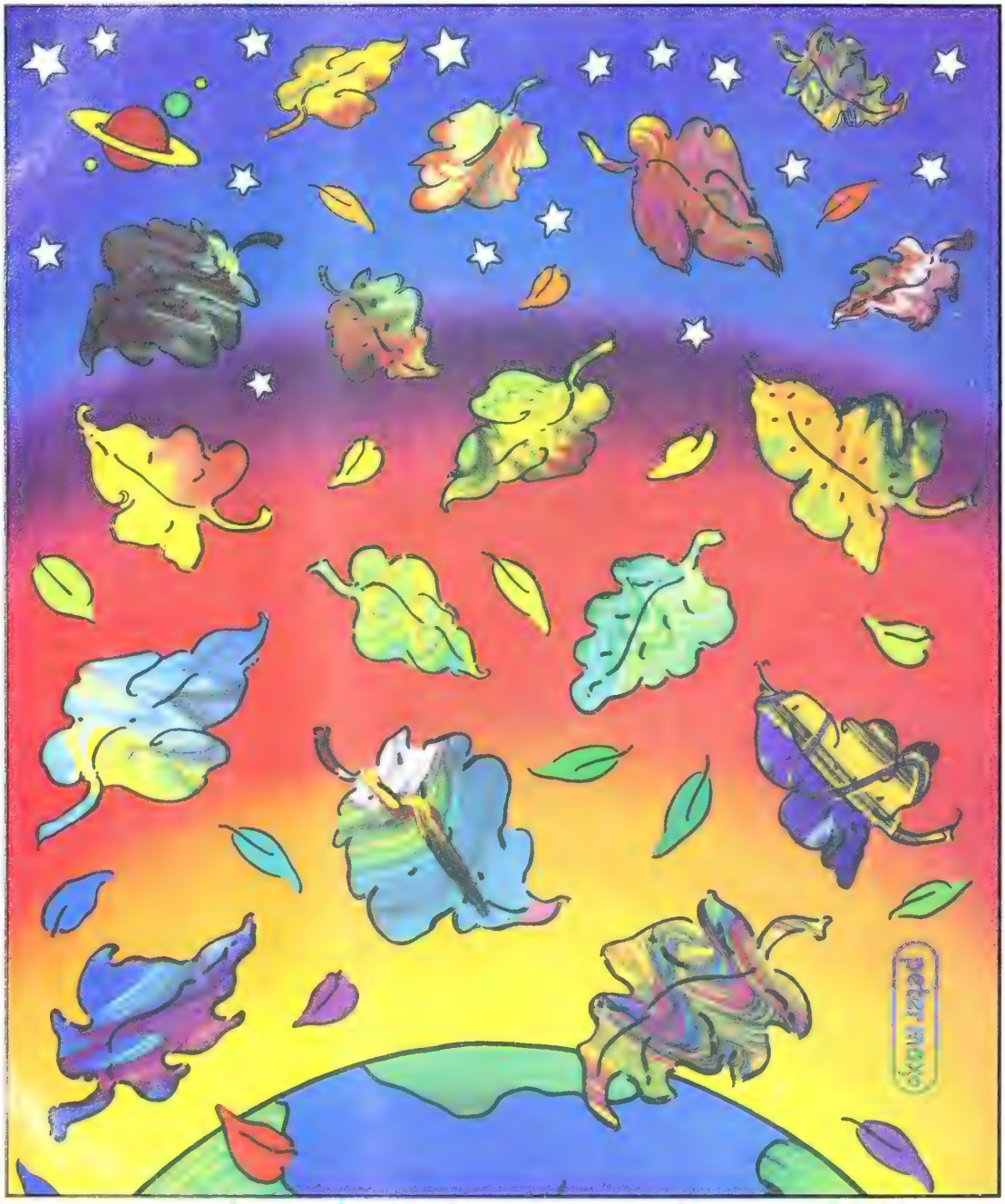
We have also deployed extensive resources through our Wheelabrator Technologies Division to develop advanced air-quality technology in order to provide trash-to-energy services to those communities requiring alternatives to traditional land disposal without burdening the quality of the air in and around those communities.

Times are, indeed, changing. Times changed when the nation looked around and saw pollution and resolved to stop it; saw open, burning dumps and resolved to close them; saw hazardous wastes and resolved to manage them; and saw raw materials being wasted and resolved to recover them.

Today, we're all stewards of the environment. Where prevailing law once told industry that it must pay if it damaged the environment, the new ethic tells industry it pays if it fails to protect the environment. There's a big difference. Some estimates say that by the end of this decade, as much as 3% of our GNP will be devoted to environmental protection.

The challenge to industry is to provide the talent that understands what opportunities first among the changes taking place.

SAVE THE EARTH
SPECIALS



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"Tides of War"
"Endangered Cultures"
Sunday, February 23
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The Cousteau Society
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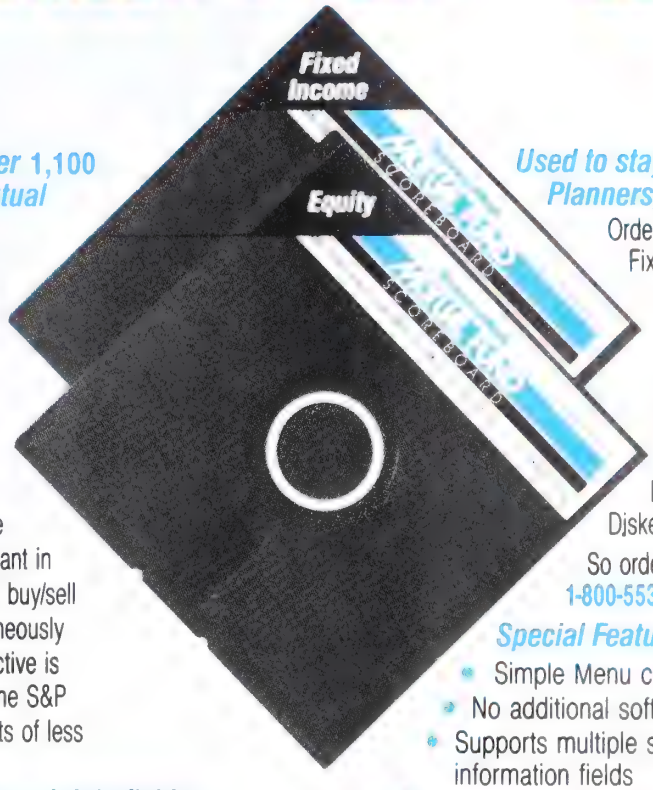

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WHY THE PROS ARE HOLDING THEIR EUROPE CARDS

ANALYSTS SAY STICK TO BLUE CHIPS, THE BOURSES WILL REBOUND

Europe's bourses demonstrated remarkable resiliency during much of 1991, shaking off the war in the gulf, a coup in the Soviet Union, and the prolonged U. S. economic drought. But as recession spread from Britain onto the Continent, the markets began to run out of steam. With Germany now feeling the recession's pinch even as the Bundesbank continues to keep interest rates high, 1992 looks as if it will be off to a rocky start. Across Europe, economic growth is expected to be 1.5% at best.

Even the European Community's recent decision to begin using a single currency by the late 1990s is doing little to lift the stock markets' spirits. While the adoption of one currency likely will mean big savings and improved trade, Europe still will have to endure several more years of high interest rates and corporate restructuring to get itself in shape for the big shift.

Yet investment pros caution against letting such downbeat news scare you away from European equities. By the second half of 1992, economists believe, Bundesbank President Helmut Schlesinger will begin cutting interest rates, perhaps by as much as 1 percentage point. Such a move would fire up bond markets and give a "green light for the rest of Europe that it's safe to bring their rates down, too," says George A. Magnus, chief international economist for S. G. Warburg & Co. And that, argues Stephen F. White, a director of London's Foreign & Colonial Management Ltd., could be exactly what is needed to start the bourses rallying again—just as Europe prepares to drop its internal trade barriers at the year's end. Says White: "We're at a stage where the m kets could turn fairly soon."

White especially likes Germany a France, which he thinks could tur gains of about 20% in 1992. Even re sion-wracked Britain seems set fo stock market bound, with Paf A. F. Gifford, international str gist at Robert F ing Investment L agement Ltd., casting an upsi of 24%.

BETTER BANKS. first group to off, many say, be the interest- sensitive bank insurance stocks pecially those strong capital ba For example, K Kaposi, managin rector of Frank

HOW THE WORLD'S BOURSES FARED IN 1991

	Percentage change*	
	In local currency	In dollars
HONG KONG	37.9%	38.3%
AUSTRALIA	26.8	26.6
U.S.	17.0	17.0
SWITZERLAND	18.6	8.1
BRITAIN	14.1	7.4
FRANCE	13.2	6.3
JAPAN	–0.1	5.3
CANADA	3.1	4.8
GERMANY	6.4	0.4
ITALY	–5.5	–11.0

*Through Dec. 13

DATA: MORGAN STANLEY CAPITAL INTERNATIONAL

d Schröder Münchmeier Hengst
al, likes Deutsche Bank. The Ger-
lender already has written off
of its $750 million in Soviet loans
s making a bundle on the rehabilita-
of eastern Germany.
rdy Union Bank of Switzerland is a
ite of Heinrich Looser at Zurich's
Julius Baer & Co. And Foreign &
ial's White recommends Swedish
Skandia International Insurance.
ees the volatile Stockholm market
cing back as falling inflation and
r productivity enable the center-
government of Prime Minister Carl
to bring down Sweden's onerous
interest rates.
rope will not be entirely out of the
s even if the expected interest-rate
ie comes off on cue. The fracturing
t Union promises to keep traders
dge. And political uncertainty will
loom large in Britain, France, and
Britain's Con-
ative Prime
ster John Ma-
or instance, is
ired to hold
ions by July.
stors already
retting over a
ible electoral
ry by the La-
Party. Even if
ories triumph,
high-flying
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sh Telecom-
cations, Brit-
as, and a slew
ater and elec-
companies are
to be in for
ner regulation
eaner profits.
springtime lo-
ections approach, France likewise is
ring jitters over political feuding
nigh unemployment. With the Paris
se down 8% in December, the So-
t government recently was forced
nk its planned $410 million sale of
es in state-owned oil giant Elf Aqui-
. That could spell rough sledding
other planned privatizations, says
inique Bourjac, research chief of
oyat Associates. Nevertheless,
jac still believes wages, inflation,
he budget deficit will remain under
ol. That, he says, will spark a mar-
urnaround.
th uncertainty running high, most
advise sticking to solid blue chips
predictable earnings that will pros-
t the first sign of economic recov-
at home and in the U.S. Gianluca
ddini, fund manager at Lugano-
d Arner Investment Group, is buy-
wo big French companies: consum-
roducts maker BSN and Alcatel Alsthom, the French telecommunications and engineering group. Each has positioned itself well for the new, single-market Europe by restructuring and establishing footholds across the EC.

Unilever, the Anglo-Dutch consumer giant, and Guinness, the British brewer and distiller, also are high on many buy lists. So are companies that seem to do well in good times and bad. Among the favorites are two supermarket chains, Britain's Tesco and France's Carrefour.

GUSHERS. Any economic rebound in the U.S., together with the strengthening dollar that many currency experts see coming, could spell good news for hard-hit European manufacturers with big American operations. For this reason, many traders are already nibbling at such cyclicals as German chemical companies BASF Group and Hoechst, French tire maker Michelin, and glassmaker Saint-Gobain.

A EUROPEAN PORTFOLIO

Industry	Company	Country	1991 percentage change*	
			In local currency	In dollars
CONSUMER PRODUCTS	Nestlé	Switzerland	16%	6%
	Unilever	Britain/Netherlands	24	17
ENERGY	BP	Britain	–10	–15
	Norsk Hydro	Norway	–26	–30
FINANCE	Deutsche Bank	Germany	11	3
	Skandia	Sweden	48	43
	UBS	Switzerland	31	26
MEDIA AND ENTERTAINMENT	Elsevier	Netherlands	33	25
	Eurodisneyland	France	46	36
	Reed	Britain	33	27
PHARMACEUTICALS	Astra	Sweden	41	39
	Glaxo	Britain	96	86

*Through Dec. 17

DATA: BRIDGE INFORMATION SYSTEMS INC., SMITH NEW COURT CARL MARKS INC

With falling crude prices presaging a pickup in refinery earnings, Europe's multinational oil groups, including British Petroleum, are also winning some converts. But Gary L. Bergstrom, president of Boston's Acadian Asset Management Inc., prefer a less well known issue, Norsk Hydro, a well-managed Norwegian energy conglomerate with huge North Sea oil reserves. Its earnings are expected to surge as much as 40% in 1992 after a disappointing 1991.

Investors inclined toward more risk might consider media stocks. Michael T. Woodward, investment director of Edinburgh's Ivory & Sime PLC, is betting that companies will step up advertising as the world economy recovers from its current funk. So he's buying British-based multinational publisher Reed International, TV broadcaster Carlton Communications, and Dutch magazine and newspaper publisher Elsevier. Other risk-tolerant analysts, however, favor pharmaceutical issues, including those of two fierce rivals, Britain's Glaxo and Sweden's Astra.

Most stock-pickers argue that recession or not, consolidations and mergers will continue as Europe's nations get ready for free trade and one currency. In addition to banking and insurance, such industries as engineering, food, and pharmaceuticals are likely to see plenty of merger action. Foreign & Colonial's White, for example, thinks German drugmaker Schering and French beverage producer Groupe Pernod Ricard could be vulnerable to raiders. Other pros are more content following the buyers, including Switzerland's BBC Brown Boveri, part of the globe-girdling ABB Asea Brown Boveri Holding engineering group. ABB has been gobbling up companies all over the Continent to create a network of local units.

Another hot theme for the '90s is the reconstruction of eastern Europe. French appliance maker Moulinex, which recently acquired German rival Krups, is going gung ho in the East, says Foreign & Colonial's White. And the rising appetite for home ownership in the former East Germany, says Schröder's Kaposi, will provide new opportunities for Bayerische Hypotheken- und Wechsel-Bank, the Bavarian mortgage bank. Kaposi also likes Altana, a German baby food and consumer-products maker.

As always, there is a host of more exotic choices. Ivory & Sime's Woodward recommends Efacec, a Portuguese electric utility poised for rapid expansion. And White suggests Spain's ACESA, an operator of toll roads around Barcelona, site of the summer's Olympic Games.

Some wise hands counsel waiting until the economy looks brighter. Britain's Lord Rothschild, for example, is starting an insurance company and buying gold. "Avoid equities," he advises. But investors seem to disagree. They may suffer some uneasy moments while the economies shake out, but they continue to believe the bourses can't escape the powerful lure of the expected '92 rebound. For them, the payoff may be worth the nervous wait.

By Richard A. Melcher in London, with Igor Reichlin in Bonn and William Glasgall in New York

THE PACIFIC RIM: TIME TO TEST THE WATERS AGAIN?

AS TOKYO FALTERS, MONEY IS FLOWING INTO OTHER ASIAN PORTS

From one end of the Pacific Rim to the other, stock markets used to be as hot as the steaming sun beating down on Jakarta's red-tiled rooftops. But ever since Tokyo started to crumble in 1990, reality has taken hold with a vengeance.

Most of the region's bourses did little more than mark time in 1991, with Tokyo still hovering near its postcrash lows and Jakarta down a painful 46% after a 2% gain in 1990. Still, the Pacific's equity experts haven't given up hope. Even though the Japanese economy is cooling, many other countries in the vast area are continuing to expand at a healthy clip. That's drawing Asia's smart money back into Hong Kong, Singapore, and Australia. Even more may flow in after South Korea opens its stock market to foreign investors in January. In 1992, says Robert J. Rountree, regional economist at Hong Kong-based James Capel (Far East) Ltd.: "The best investment opportunities in Asia will be outside Tokyo."

Indeed, Tokyo's coming year may not be pretty at all. The Bank of Japan has started to lower interest rates, but so far the economy is not responding. With economic growth slowing to a 1.6% annual rate between July and September, big manufacturers now estimate profits will shrink 9% in the fiscal year ending in March. Such predictions have knocked 10% off of the Nikkei stock average since early November. Unless the central bank eases money dramatically, the Nikkei could fall an additional 3,000 points, to 19,000, in early 1992, says Alan P. Bell, a strategist at Baring Securities (Japan) Ltd.

Chilling predictions of this sort are persuading a growing number of investors to head for Hong Kong. Fueled by 1991's steep drop in interest rates, from 8.25% to 5.6%, profits are surging at a 14% annual rate. Gross national product growth may hit 6% in 1992 on top of 5% the year before, yet the market's price-earnings ratio remains a modest 12, a little more than half that for the Standard & Poor's 500-stock index. While some observers worry that Washington may penalize China by denying it most-favored-nation trading status, Capel's Rountree likens investor sentiment to "a coiled spri... The market, he predicts, "will shoot u...

The experts' Hong Kong picks run a gamut from real estate to consumer ... tourism issues. On Dec. 11, an issue ... 108 million Cathay Pacific Airw... shares sold out in just 45 minute... quarter of the time usually ... quired for such a placement. F... ing interest rates are also giv... property stocks a lift. Am... them, Nomura Research Instit... analyst Kimitaka Morikawa rec... mends housing developer Che... Kong (Holdings).

BOATS AND PLANES. Fast econo... growth is also benefiting Singapo... market. Down 50% after Iraq's in... sion of Kuwait, the *Straits Times* ... dex has snapped back to pre-invas... levels. Now, says Siewkheng Low, ... search director at Baring Securities (S... gapore) Ltd., falling interest rates m... spark another rally. James B. Conhea... first vice-president at Smith Barn... Harris Upham & Co., likes Jurong Sh... yard, a ship repairer with earnings p... jected to rise 27% in 1992. Others fa... Singapore Airlines. With a p-e of ... says Nomura's Morikawa, "it has b... forgotten by the market."

Not too long ago, you could have s... the same thing about Australia, wh... had been batte... by recession. ... falling inflati... and interest ra... are a power... lure. With Aust... lia's economy ... pected to expa... 2% in 1992, inv... tors are flocki... down under.

Smith Barne... Conheady is p... dicting stro... growth for Co... Cola Amatil, ov... er of fast-growi... Coke bottlers ... Hungary, Czec... slovakia, Indo... sia, and, of cour... Australia. But ... interest rates ...

A PACIFIC PORTFOLIO

Country	Company	Industry	1991 price change*	
			In local currency	In dollars
JAPAN	Toshiba	Electronics, machinery	–4.5%	0.3
	Shizuoka Bank	Regional lender	58.1	65.9
	Yamaha Motor	Motorcycles	32.6	39.2
SINGAPORE	Jurong Shipyard	Ship repair	83.6	115.8
	Singapore Airlines	Airline	54.6	63.0
HONG KONG	Cathay Pacific Airways	Airline	38.6	39.3
	Fairwood Fast Food	Restaurants	33.8	33.5
	Cheung Kong	Real estate	51.2	52.0
AUSTRALIA	Coca-Cola Amatil	Beverages	59.0	59.0
	News Corp.	Publishing	222.0	222.0
NEW ZEALAND	Carter Holt Harvey	Forest products	15.2	9.1
PHILIPPINES	Philippine Long Distance Telephone	Telecommunications	186.6	192.8

*Through Dec. 17

DATA: BW SURVEY OF ANALYSTS AND FUND MANAGERS, JAMES CAPEL (FAR EAST) LTC.

, some bold investors are even buy- into such debt-laden companies as ert Murdoch's News Corp., which re- ly floated $404 million worth of new es. The pros also like New Zealand. ecting strong exports, many are ng bets on forest-products producer er Holt Harvey.

espite the enthusiasm for Aussie and issues, some investors are waiting Seoul to open the doors on its stock xet. Until now, the only way to get Korea was by purchasing convert- bonds or investing through the lful of closed-end funds. But with Big Board-listed Korea Fund, for ex- le, down 70% since 1989, Seoul has little attraction lately. That's not ease in the Philippines. Despite vol- eruptions and a looming U.S. pullout, Manila surged 75% in Even so, Philippine Long Distance phone has a p-e of just 4. "That's ulously cheap," says Rountree.

RTING TOKYO. Even though most an- s expect Tokyo to fall further, no rsified Pacific portfolio can ignore Japanese market, which is four s the size of all other Asian bourses bined. But after two turbulent s, Tokyo is hardly for the faint of t. Baring analyst Bell recommends sing on companies that are slashing s to compete in Japan's tight-money ronment. Among them: integrated- it maker Rohm and Ajinomoto, a inational food processor.

cost-cutting is going to be the norm, could be the time to get back into ufacturers positioning themselves growth once Japan's economic slump s. Gary L. Bergstrom, president of on's Acadian Asset Management likes motorcycle makers Yamaha or and Suzuki Motor. And Bell sug- s Toshiba, Honda Motor, and Sumi- Forestry—the possible beneficiary ny pickup in housing starts.

me analysts believe there is still to sell Tokyo short. Los Angeles- d investment adviser Bill Mason, for is buying Nikkei put warrants listed he American Stock Exchange. These rants allow you to collect cash from issuers if the Japanese stock aver- falls below predetermined levels by . One such issue by the PaineWeb- Group has climbed 46% since Octo- Of course, such warrants could met if the Nikkei recovers.

mid such uncertainty, many Pacific counsel steering clear of Tokyo pletely. But that doesn't mean you ld bypass the whole region. Even Japan in the doldrums, the Pacific's ses could turn out to be among the d's most rewarding as 1992 unfolds.

By Ted Holden in Tokyo, with Stephen heon in Sydney and William Glasgall ew York

HOP A PLANE, BUY A STOCK, HOP A PLANE, BUY A STOCK...

MARK MOBIUS

After several unsuccessful tries at penetrating the crackling, whirring Pakistani phone system, this caller from America is finally rewarded by the clear, cool voice of J. Mark Mobius, a man who will go anywhere to bag a bargain. With Pakistan recently opening its stock market to foreigners, this time Mobius is prowling Islamabad for buys. But to his disappointment, the market has already climbed 60% in the past month. "The market has run away from us," Mobius complains.

He may be cautious on Pakistan right now, but not many other fledgling markets have gotten away from this globe-trotting stock-picker for the $207 million Templeton Emerging Markets Fund. Indeed, Lipper Analytical Services Inc. estimates Mobius' closed-end fund has turned in a stunning 67% total return over the past two years as one developing country after another has turned friendly to foreign investment. "He's the class act," says Lipper analyst William G. McBride.

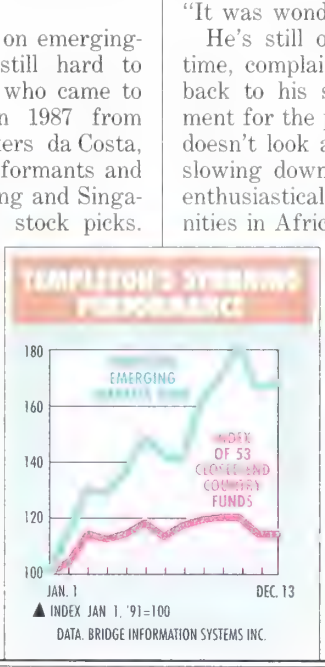
Publicly available data on emerging-economy companies is still hard to come by, so Mobius, 54, who came to the Templeton group in 1987 from Hong Kong broker Vickers da Costa, has a network of local informants and five analysts in Hong Kong and Singapore who come up with stock picks. But he relies on extensive face-to-face meetings with corporate executives to guide his selections. "We're bottom-up investors," he says. "We have to do company interviews."

SOY POP. Mobius' disciplined approach has kept him out of South Korea and Taiwan, which hamper investors with foreign-exchange controls. Instead, he likes such Latin American issues as Argentine oil-service group Pérez Companc, Chilean railroad owner Antofagasta, and the recently privatized Teléfonos de Mexico, one of the global stock market's biggest winners in 1991. He also is high on a number of Asian issues, including Philippine Long Distance Telephone and Hong Kong conglomerate Jardine Matheson. After the big run-ups in Latin American stocks, Mobius has recently started taking some profits, especially in Mexico. But he remains in 14 countries, including Brazil and Thailand.

The New York-born Mobius has been a fan of developing economies for close to 30 years. Holder of a PhD in economics from the Massachusetts Institute of Technology, he moved to Hong Kong in the early 1960s to help Monsanto Co. try to introduce a soybean-based soft drink. When the operation bogged down, Mobius stayed on, ranging the world as a consultant. "I did studies on every industry from soap to tractors," he says. "It was wonderful training."

He's still on the road much of the time, complaining that he hasn't been back to his small Hong Kong apartment for the past three months. And it doesn't look as though Mobius will be slowing down anytime soon. He talks enthusiastically about coming opportunities in Africa and the fractured Soviet Union. He believes that Pakistan opening its market will soon force India to do the same. And even more exotic destinations are beckoning. If not for the U.N. sanctions, he says, he would even look into Saddam Hussein's recent offer to open an exchange in Bahdad.

By Stanley Reed in New York



PHOTOGRAPH BY ALAN DOROW

FROM *BOLSA* TO *BOLSA*, THERE'S PLENTY OF *SALSA*

LATIN AMERICAN MARKETS HAVE MADE A STUNNING COMEBACK

Only a few years ago, Latin American politicians were about as welcome on Wall Street as bankruptcy lawyers. As Argentina's reform-minded President Carlos Saúl Menem recently discovered, that's hardly the case anymore. At a gathering at New York's Waldorf-Astoria, a mob of once-incredulous bankers and investors greeted the dapper President with hurrahs and a standing ovation as he detailed how his economic recovery plan is bearing fruit. Beamed Menem: "We're better off than anyone ever thought possible."

A lot of Latins are making that claim these days, and with ample justification. With one country after another embracing democracy, restructuring onerous foreign debts, and adopting free-market ideals, yesterday's pariahs have quickly turned into today's heroes. And nowhere has that change been more apparent than on the region's bustling *bolsas*.

BETTER DAYS. From Mexico City to Buenos Aires, formerly moribund stock markets have emerged as some of the best performers on the globe (table). As Latin markets have blossomed, so have ways to join the action. About two dozen companies, from the giant Teléfonos de Mexico (Telmex) to a flock of smaller manufacturers, have already come out with American depositary receipts (ADRs) on U. S. markets. Some 60 more may be listed by the end of 1992, estimates Jorge O. Mariscal of Nomura Research Institute America Inc.

Ten Latin American mutual funds have also made their debuts in the past few years. Some, such as the recently launched Argentina Fund, focus on a single country. But other funds span the region. Take the $100 million G. T. Latin America Growth Fund. Its manager, Oscar A. Castro, has been buying Telmex, Venezuelan steelmaker Sivensa, and Pérez Companc, an Argentine telecommunications and oil-service group that is likely to benefit from Menem's privatization program.

Indeed, Argentina has become the darling of investors at home and around the globe. With inflation plummeting from 4,000% to 15% a year since Menem's election in 1989, the tiny Buenos Aires stock market has exploded. But Nomura's Mariscal, for one, maintains that Argentine equities are still reasonably priced by world standards.

Although recession is spreading across the industrial world, the Argentine economy is expected to expand by as much as 5% in 1991—on top of an estimated 4% the year before. It could get a further boost if, as is widely anticipated, Menem's government reaches an agreement to restructure the country's $29 billion foreign bank debt. Yet Ma[riscal] notes that Argentine stocks are s[elling] selling for a mere 1.2 times book val[ue]. Among his favorites: Molinos, a ma[jor] food producer, and Celulosa, a pulp a[nd] paper maker.

The outlook isn't as bright for neighboring Brazil, Latin America's notewo[rthy] laggard. Political infighting a[nd] soaring inflation are rocking the regio[n's] largest economy. Amid such disheartening developments, many expect Brazil's market to plunge 40% or more in ea[rly] 1992. But some daring investors a[re] sticking it out. Lincoln Y. Rathnam [of] Scudder, Stevens & Clark Inc., [for] instance, likes Telecomunicaçõ[es] Brasileiras. "It's the cheapest pho[ne] company traded in Latin Americ[a]," he says.

Other pros counsel steering clear of Brazil for now. They f[eel] far more comfortable in Mexi[co], where President Carlos Salinas [de] Gortari's economic reforms are pa[y]ing off. Although the Mexico City m[ar]ket fell 3% in early December amid w[or]ries that a free-trade deal bei[ng] negotiated with Washington might be [in] jeopardy, Victor Ortiz, research direct[or] at Mexico City's Estrategia Bursátil, s[till] likes Telmex. Although it was privatiz[ed] in 1990, Ortiz notes that the telepho[ne] giant has been guaranteed its monopo[ly] for another five years.

PATIENCE PAYS. Ortiz also recommen[ds] Cifra, Mexico's leading retailer, which [is] opening a chain of warehouse outle[ts] with America's Wal-Mart Stores Inc. B[ut] don't expect this or any other Latin [is]sue to provide a quick killing. "La[tin] America is for medium- to lon[g]-term investors," says Hector [A.] Megy, president of the Florid[a]-based Megy Income Fund. "[If] you want to invest for 90 days, I suggest you choose anoth[er] place."

Many investors seem conte[nt] with that advice. For them, La[tin] in America may offer thrills a[nd] chills, but also the prospect [of] rapid growth after years of ec[o]nomic stagnation.

By William Glasgall in N[ew] York, with Stephen Baker [in] Mexico City

LATIN *BOLSAS* TAKE OFF

Market	Price-earnings ratio	1991 percentage change*	
		In local currency	In dollars
ARGENTINA	28.4	625%	315%
COLOMBIA	15.0	237	153
MEXICO	13.7	105	97
BRAZIL	9.1	74	84
CHILE	18.0	102	83
VENEZUELA	30.4	49	23
REGIONAL AVERAGE	21.0	NA	104

*Through Dec. 6 NA = Not available DATA: INTERNATIONAL FINANCE CORP

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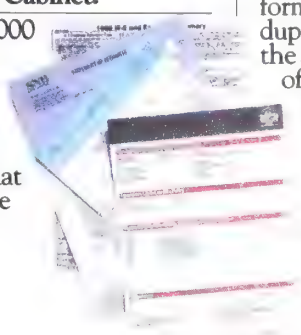

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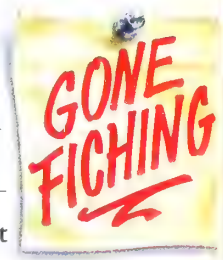

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THREE WALL STREET WARRIORS LOOK BEYOND THE BAD ECONOMY

PICKING STOCKS THAT WILL DELIVER DURING THE RECOVERY

"Life is hard, but consider the alternative," goes the saying. The same holds true for the stock market. With yields on most fixed-income investments sinking steadily, many money managers think stocks will be the only place to go for double-digit returns in 1992. Instead of biting their nails over when and how recovery will finally arrive, equity analysts say, investors should get in position to profit when it does by picking stocks while prices are off their highs.

BUSINESS WEEK asked three pros to invest an imaginary $100,000 in stocks for the year ahead. All three see opportunities, though their approaches are radically different. Here's how they would build their portfolios:

CARMINE J. GRIGOLI, chief equity strategist at First Boston Corp., thinks the second leg of the bull market will get going in the second half of 1992. By that time, he says, the economy will benefit from stimulative measures by Washington, including a tax-cut package and, possibly, more aggressive easing by the Federal Reserve. But since those changes won't happen overnight, Grigoli would keep 10% of any portfolio in reserve as "opportunity capital" for when stock prices dip even further. "The biggest mistake investors can make today is to keep little or no cash because of low returns," he says.

Then, Grigoli would put 60% of the pot into big, well-known stocks that he considers growth issues. "These are companies that over the next few years can deliver strong earnings gains even in a sluggish economy," he explains. They include Merck and Johnson & Johnson, even though both are trading near their 52-week highs. Among retailers, Grigoli likes The Limited. "The stock has the ability to surprise investors over the next few years. We're expecting strong earnings gains next year, to $1.80 a share" from $1.10 now, he says.

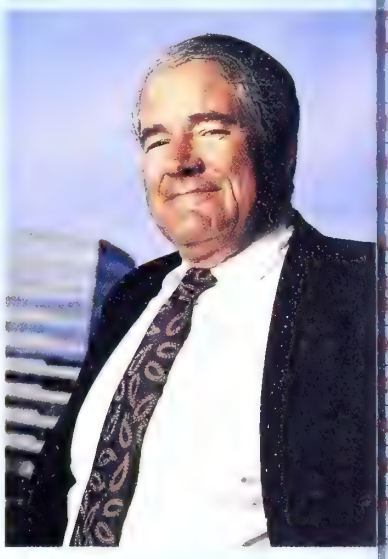
In this group, he would also choose Philip Morris and RJR Nabisco. Grigoli thinks both companies will see significant growth overseas, and both are selling at price-earnings ratios well below market multiples. Among more cyclical growth issues, he favors Intel, Motorola, and General Electric. "Here, you're obviously dealing with highly volatile stocks that should be bought for long-term appreciation." He believes investors have already absorbed a lot of bad news about these companies, whose stocks are 16% to 25% off their highs.

With the remaining 30% of the portfolio, Grigoli would go for higher-yielding cyclical issues such as Nynex, Bankers Trust, Lincoln National, and insurer American International Group. "These are companies with more upside potential in the next 12 to 18 months," he says, "and we're comfortable with the fundamentals." He also likes battered Boeing, now trading around 42, whose order backlog should keep earnings growing through 1994-95 and which has plenty of cash. And as a speculative play, he picks Phelps Dodge, arguing that unless copper prices collapse—which he doesn't foresee—the company could produce a "big positive surprise" in 1992. In general, says Grigoli, "one should develop a strategy of buying weakness, not chasing strength."

GRIGOLI: GO FOR GROWTH

Stock	52-week high	Current price*
BANKERS TRUST	68	61⅛
BOEING	53	42⅜
GENERAL ELECTRIC	77⅝	68⅜
INTEL	59¼	44½
JOHNSON & JOHNSON	106⅝	106⅝
THE LIMITED	31⅝	27½
MERCK	152⅜	151⅜
MOTOROLA	71¼	58½
NYNEX	79¼	76⅛
PHELPS DODGE	79¼	62⅛

DATA: BW, BRIDGE INFORMATION SYSTEMS INC.



FRED ASTMAN, portfolio manager at First Wilshire Securities Management Inc., focuses on the opposite end of the equity spectrum. He shepherds $25 million in individual accounts, which returned nearly 58% for 1991 through November. Astman likes small-capitalization stocks—and by that he means issues with a total market value of $50 million or less (page 72). "In that area you find a lot more issues that sell at 10

es earnings rather than 20," he says. nd they have good growth potential." Astman would divide the $100,000 enly among 10 small stocks in niche sinesses that are all over the map. His vorite is Gander Mountain in Wilmot, s., which sells hunting and fishing ar. The company does about $100 mil- n a year in mail-order sales and is now ening stores. Despite the recession, its nings were up 20% in fiscal 1991, to per share. Astman expects them to 90¢ in 1992 and $1.10 for 1993. Anoth- pick is Shopsmith in Dayton, Ohio, ich makes woodworking tools for hob- sts. In September, Shopsmith suc- sfully expanded three of its 45 stores o large, one-stop shops for do-it-your- fers. The company saw revenues rise % in 1991. Astman believes that as opsmith repeats the formula in its oth- stores, earnings per share could grow 65¢ by fiscal 1993, from 25¢ for the rrent year.

When Astman hears "health care," he nks organic. Nature's Sunshine Prod- s in Spanish Fork, Utah, is the No. 1 plier of herbs to America's health res. Nature's Sunshine also has dis- utors in Britain and Mexico, and the npany has rolled out dozens of new oducts in the past six months. Astman equally sanguine about Herbalife In- national, a vitamin and health-food ker that does 75% of its business erseas and has "loads of countries still cover." Astman expects sales to rise m $190 million this year to $223 mil- n in 1992. Both Nature's Sunshine and rbalife are trading at hefty p-e's of 21 d 28, respectively. But Astman thinks ey're worth it.

n food, Astman believes a couple of xpensive stocks could bring rich re- rds over the next year. Pancho's Mex- n Buffet, a Texas-based restaurant chain, is trading at only 5. Astman thinks earnings will rise from 50¢ per share for the year ended September, 1991, to 65¢ next year. Then there's Vacu-Dry, which supplies dehydrated fruits to all the big cereal makers. With a p-e ratio of 10, the stock will earn 65¢ for the year ending June, 1992, and $1 in 1993, Astman projects. "I see growth for these companies independent of overall economic trends," he says.

EACH PRO HAS A VASTLY DIFFERENT WAY OF INVESTING A $100,000 PORTFOLIO

ROBERT E. TORRAY, chairman of the $1 billion investment firm that bears his name, is often called a contrarian. What he calls himself, however, is an investor who believes in the future. True to his label, he shuns both the blue chips, which he thinks are overpriced, and the small caps, whose day in the sun he believes is already coming to a close. Instead, he says, he looks for value in beaten-down sectors where many other investors fear to tread. "There's a large number of very cheap common stocks out there," he says. "On average, the market looks overpriced because it's held up by the Mercks. But if you look away from those particular stocks, there are plenty of values."

Torray's biggest investment is Salomon Brothers. Not only does he believe it's financially strong, but Warren E. Buffett's "approach will ensure it'll do far better than it ever did before." At 28, Salomon stock is 27% off its 52-week high. "If it goes down further, I'll just buy more," says Torray. He is also loading up on American Express, "which everyone loves to hate." With its stock languishing at 19, "I still think it's a substantial and valuable franchise."

Among out-of-favor health care companies, Torray is voting with hospital chains such as Humana, Community Psychiatric, and National Medical Enterprises. "These companies have taken a pasting," he says, "but the demand for their services is persistent." By the same rationale, Torray likes Browning-Ferris Industries, Rollins Environmental Services, and Laidlaw in the waste-removal sector. "There's a permanent, large supply of trash," he says. "I like the dynamics of that."

Where Torray's contrarian nature seems to show most is in his fondness for newspaper companies. Unlike many media analysts, he thinks the downturn in the industry is cyclical rather than secular. "Once Macy's and Saks and Federated get reorganized, ads will be up again," he predicts. His holdings include New York Times Co., Dow Jones, Tribune Co., and Times Mirror. "I don't think we'll ever go back to the biggest years of the '80s," says Torray. "But these things still generate a lot of free cash flow."

What about poor IBM, smashed down to half its five-year high? It's not a favorite of Torray's. Although some of his colleagues think it's a buy, especially with a dividend of close to 6%, he's not among them. He says that is because he has never felt comfortable putting money into computer companies. It may also be because believing in IBM isn't, well, contrarian enough.

By Joan Warner in New York

ORRAY: TURNAROUNDS

	52-week high	Current price*
CAN EXPRESS	30⅜	18⅜
NING-FERRIS	30¾	19¼
NA	35	24⅝
W	20¼	7¾
NAL MEDICAL PRISES	25	14½
ON BROS.	37	27⅝
MIRROR CO.	32⅝	26¾
NE CO.	48⅜	36⅛
	24½	10⅝
NGHOUSE ELECTRIC	31	14¾

ec. 17

ASTMAN: NICHE-PICKING

Stock	52-week high	Current price*
ASSIX INTERNATIONAL	3⅝	2⅜
CALFED	8⅝	1⅝
GANDER MOUNTAIN	10¾	10¼
HERBALIFE INTERNATIONAL	3¾	2¾
HOSPOSABLE PRODUCTS	10¼	5
KENTUCKY MEDICAL INSURANCE	16	9¾
NATURE'S SUNSHINE PRODUCTS	20	18½
PANCHO'S MEXICAN BUFFET	8	4¾
SHOPSMITH	7¾	5
VACU-DRY	6½	6½

MICHAEL GRECCO

CAN FUND MANAGERS KEEP ROLLING UP GAINS LIKE THESE?

HEALTH CARE AND BIOTECH STOCKS MAY CARRY THE GROWTH INTO '92

Come Dec. 31, champagne corks will be popping in offices of mutual-fund managers across the country. And why not? The U. S. won the Persian Gulf war, communism is dead, and, best of all, the typical equity fund will have beaten the market by 2.5% for the year. According to Morningstar Inc., the average equity fund was up 22.45% compared with a 19.92% gain for the Standard & Poor's 500-stock index. Normally, mutual funds as a group underperform the stock market by about 2%.

Fund managers' fine performance this year should help them justify their existence. Although there's plenty of evidence that indexing—buying a basket of stocks that replicates a broad market measure such as the S&P 500—pays off in the long term, 1991 should turn out to be a year when it paid to manage your portfolio actively, or have someone do it for you. The opposite was true in 1990, when the average equity fund fell 7.35%, compared with a 3.10% decline in the S&P 500.

Some managers regard 1991's results as proof of the virtues of stock picking over indexing. Says William M. B. Berger, whose Berger 100 fund turned in a 74.04% return through Dec. 13: "Unlike index-fund managers, we don't have to buy mediocre stocks. We own only the successful companies that make up the top 10% of the market."

EYE-POPPING. In fact, the main reason that fund managers beat the indexes this year is not quite so sweeping. It can be summed up in a phrase: small-cap stocks. In 1990, many fund managers weighted their portfolios toward these issues in anticipation of a small-cap rally that never arrived. In 1991, true believers in small-cap issues, especially those of the biotech variety, finally saw their dreams come true. That's because widely followed indexes such as the S&P 500 and the Dow Jones industrial average favor stocks with large capitalization. While the blue-chip Dow index was ahead 10.7% for the year, the NASDAQ composite of over-the-counter issues soared 44.7%. "It was a year when risk was rewarded," says Don Phillips, publisher of *Morningstar Mutual Funds*. "Biotechnology, small companies, and aggressive growth strategies did extremely well."

Although the stock market's sudden 120-point drop on Nov. 15 took some of the air out of biotech issues, funds in this sector of the market delivered eye-popping returns for the year. Oppenhe

EQUITY FUNDS: THE LARGEST, THE BEST, THE WORST

Dazzling returns aren't the only bright spot in the picture. As rates on bank CDs and T-bills hovered near 15-year lows, a record amount of new money flowed into funds

THE 20 LARGEST EQUITY FUNDS

Fund	Assets* Billions	Total return** 1991	Total return** 5-year avg.
Fidelity Magellan	$17.28	29.35%	14.64%
Investment Co. of America	8.94	18.30	12.19
Windsor	7.80	19.67	8.45
Washington Mutual	7.43	15.11	10.19
Fidelity Puritan	4.96	17.25	8.99
Fidelity Equity-Income	4.28	20.94	7.84
Templeton World	4.14	21.62	8.64
Twentieth Century Select Investors	4.09	20.24	11.65
American Mutual	4.08	14.38	9.96
Pioneer II	4.04	13.55	8.79
Vanguard Index 500	3.64	19.88	11.95
Affiliated	3.52	13.83	8.24
Dean Witter Dividend	3.40	21.18	10.88
Wellington	3.36	16.09	9.58
Windsor II	3.21	19.97	10.14
Income Fund of America	3.01	17.70	9.76
Twentieth Century Growth Investors	2.99	52.58	17.36
Growth Fund Of America	2.96	25.25	13.95
Templeton Growth	2.92	23.62	11.99
Fidelity Growth & Income	2.91	32.77	14.96

*As of Sept. 30 **Includes dividends and capital gains. 1991 returns through Dec. 13; 5-year, through Nov. 30

DATA MORNINGSTAR INC

1991 BEST

	Total
Oppenheimer Global Bio-Tech	1
American Heritage	
Fidelity Select Biotechnology	
Montgomery Small Cap	
CGM Capital Development	
Financial Strategic Health Sciences	
Berger 100	
Oberweis Emerging Growth	
United New Concepts	
Twentieth Century Ultra Investors	
Twentieth Century Giftrust Investors	
MFS Lifetime Emerging Growth	
Fidelity Select Health Care	
John Hancock Special Equities	
Financial Strategic Financial Services	
Fidelity Select Brokerage	
Kaufmann	
ABT Emerging Growth	
MIM Stock Appreciation	
Financial Strategic Technology	
Average for 940 equity funds	
S&P 500-stock index	

r's Global Bio-Tech
nd turned in the best
formance of 1991,
h a total return of
.57%. (All figures re-
et results through
. 13.) Last year's top
nd, Fidelity Select
technology, was a
hflier this year, with
otal return of 81.60%.
Fidelity Select Bio-
nnology and its sis-
fund, Fidelity Select
alth Care, up 66.53%
991, have defied the
ventional wisdom
t a red-hot fund one year may turn
to be ice-cold the next. Says Sheldon
obs, editor of *The No-Load Fund In-
tor*: "It's surprising that an industry
uld stay on top for that long." Can
es really grow to the sky? No, but
hael Hines, senior vice-president of
elity Investments in Boston, says it's
sible for a fast-growing sector such
health care to maintain market lead-
hip for several years in a row. At
st, that's what Fidelity's investors are
oing, since 47% of the assets in the
n's sector funds are in Select Biotech
Select Health Care.

But fund managers didn't have to in-
t exclusively in biotech to benefit
m the small-cap rally. Montgomery Small Cap's 81.37% gain, Oberweis Emerging Growth's 72.75% increase, and Twentieth Century Ultra Investors' 70.65% return helped these funds top the charts in 1991.

One of the year's Cinderella stories was American Heritage Fund, which posted an 86.11% increase in 1991—second only to Oppenheimer's Global Bio-Tech. In 1990, the fund was at the top of the worst five-year performance list. The manager responsible for the turnaround at American Heritage is Heiko Thieme, who took over the fund early in 1990. The 48-year-old former U. S. equities strategist for Deutsche Bank Capital Corp. says he normally takes a long-term view toward investing, but he put this philosophy on hold in 1991. "It was a year when it paid to be a stock picker who moved very rapidly," Thieme says. He's not kidding—American Heritage changed its entire portfolio three times during the year. Two of Thieme's current favorites are MTC Electronic Technologies Co. and Fidelity Medical Inc.

TROOPING IN. If dazzling returns were not enough reason for mutual-fund managers to celebrate, surely the massive flows of capital they attracted were. As rates on bank certificates of deposit and Treasury bills hovered near 15-year lows, investors flocked to mutual funds in search of higher returns. Through the first 10 months of 1991, sales of equity funds exceeded redemptions by $30.2 billion, according to the Investment Company Institute. That figure already exceeds the $25.7 billion in net sales for all of 1990 and approaches the record of $31.9 billion set in 1987. As of Oct. 31, the year had already set a record in terms of total sales of equity funds. Including reinvested dividends, $74.9 billion in new money flowed into equity funds, outpacing the previous an-

BEST-PERFORMING FUND GROUPS

	Total return*		Total return*
HEALTH CARE	59.60%	EQUITY/INCOME	19.09%
FINANCIAL	47.16	BALANCED	18.25
SMALL-COMPANY	39.81	UTILITIES	16.46
MAXIMUM GROWTH	35.22	ASSET ALLOCATION	13.50
TECHNOLOGY	32.78	OPTION	13.11
GROWTH	25.56	INTERNATIONAL	9.02
MISCELLANEOUS	23.95	DIVERSIFIED EQUITY FUNDS	26.27
INCOME	23.35	ALL EQUITY FUNDS	22.45
GROWTH AND INCOME	19.75	S&P 500	19.92

*Appreciation plus gains through Dec. 13

DATA: MORNINGSTAR INC

FIVE-YEAR BEST

	Average annual return*
rategic Health Sciences	32.07%
ect Biotechnology	27.19
ect Health Care	23.95
Century Ultra Investors	22.63
)	21.67
ect Medical Delivery	21.54
l Capitalization	20.84
merging Growth	20.70
ese Small Company	20.64
	20.64
folio: Growth	20.49
Specialized Health Care	20.35
	19.88
alth Sciences	19.75
ntrafund	19.32
ect Food & Ag	19.30
Group DelCap I	18.97
izon Aggressive Growth	18.85
ner Discovery	18.42
	18.27
or 635 funds	10.07%
stock index	12.27%

1991 WORST

	Total return*
Fidelity Select Energy Service	–24.96%
Strategic Gold/Minerals	–24.92
MetLife-State Street Global Energy	–17.84
Strategic Investments	–15.23
Strategic Silver	–14.80
Benham Gold Equities Index	–13.16
USF&G European Emerging Companies	–13.11
United Services Gold Shares	–11.45
Shearson Precious Metals	–10.55
Mackenzie Canada	–10.49
DFA Continental Small Company	–9.45
Fidelity Select American Gold	–8.14
Steadman American Industry	–7.95
Financial Strategic Gold	–7.84
Bruce	–7.70
Thomson Precious Metals	–7.41
Scudder Gold	–7.33
Colonial Adv. Strategies Gold	–6.76
Financial Strategic Energy	–6.38
MFS Lifetime Gold	–6.06

FIVE-YEAR WORST

	Average annual return*
Strategic Gold/Minerals	–15.99%
Strategic Investments	–10.65
Steadman American Industry	–10.55
Steadman Ocean. Tech. & Growth	–10.11
United Services European Equity	–8.80
44 Wall Street	–7.50
Strategic Silver	–6.76
Pilgrim Corporate Utilities	–4.34
Vontobel EuroPacific	–4.02
Steadman Investment	–3.76
Financial Strategic Gold	–3.24
Steadman Associated	–3.00
USAA Investment Gold	–2.63
United Services Gold Shares	–2.33
United Services World Gold	–1.71
Fidelity Select Defense	–1.35
Bruce	–1.24
Afuture	–1.02
American Heritage	–0.71
Shearson Precious Metals	–0.59

*Appreciation plus capital gains through Dec. 13 for 1991 figures and Nov. 30 for five-year numbers

DATA: MORNINGSTAR INC.

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MUTUAL FUNDS

nual record of $72.1 billion in 1987.

Investors also sought higher returns in fixed-income funds. As the Federal Reserve aggressively cut interest rates and returns on Treasury bills and money-market funds declined, investors moved further out along the yield curve into fixed-income securities maturing in two to five years. At Fidelity, the Spartan Limited Maturity Government Fund started the year with $162 million in assets and accumulated $2.8 billion by the end of November. The fund, which has an average maturity of 5.26 years, yielded 7.88% over the past 30 days, compared with an average seven-day yield of 4.73% for taxable money funds in the seven days ending Dec. 10, according to *IBC/Donoghue's Money Fund Report.*

Even though money-market mutual funds are currently yielding less than the familiar passbook-savings-accou level of 5%, the lion's share of indus assets is still in these funds. Of the $ trillion under management by U. S. n tual funds, $546.4 billion is invested money-market funds. But they are growing as rapidly as in previous yea says Betty Hart, director of public inf mation for the Investment Company stitute. Through the end of October, vestors exchanged $7.1 billion of mon market funds for equity and bond fu within the same mutual-fund family.

NEW MONEY. For the first 10 months 1991, sales of bond and income fu exceeded redemptions by $62.8 billi This is more than twice the level in 19 but far less than the record of $11 billion set in 1986. Including reinves dividends, $109.4 billion in new mor flowed into bond and income fu

THE BEST OF THE BOND FUNDS

1991'S BEST TAXABLE BOND FUNDS

	Total return*
Dean Witter High-Yield Securities	67.08%
Liberty High-Income Bond	57.98
AMEV Advantage High-Yield	56.46
National Bond	51.00
Federated High-Yield	50.32
Mass. Financial High-Income I	49.19
MFS Lifetime High-Income	48.88
Franklin Tax-Advantaged High-Yield	47.79
Kemper High-Yield	46.95
Franklin AGE High-Income	46.36
Kemper Investment Port. High-Yield	46.17
PaineWebber High-Income A	45.58
Putnam High-Yield II	44.47
Keystone America High-Yield Bond	43.95
Colonial High-Yield Securities	43.75
Average for 473 funds	11.17

1991'S BEST TAX-FREE BOND FUNDS

	Total return
Transamerica Tax-Free Bond	12.71%
Premier New York Municipal Bond	12.63
Fidelity Spartan NY Muni High-Yield	12.33
GW National Municipal Income	12.31
Smith Barney Muni Bond New York	12.27
Putnam NY Tax-Exempt Income	12.26
New York Muni	12.22
Franklin NY Tax-Free Income	12.13
General Municipal Bond	12.01
Nuveen Tax-Free Bond New York	11.99
Eaton Vance New York Tax-Free	11.94
General NY Municipal Bond	11.93
Van Kampen Merritt Municipal Income	11.87
Flagship All-American Tax-Exempt	11.82
Vanguard Municipal High-Yield	11.67
Average for 471 funds	9.09

FIVE-YEAR BEST: TAXABLE BOND FUNDS

	Average annual return*
Benham Target Maturities 2005	13.72%
Benham Target Maturities 2000	13.31
Benham Target Maturities 1995	12.41
MFS Worldwide Governments	12.37
Merrill Lynch Glob. Bd. For Invest. B	12.11
FPA New Income	10.82
UST Master Managed Income	10.59
Merrill Lynch Corp. High-Income A	10.36
Mackenzie Fixed-Income	10.18
T. Rowe Price International Bond	10.14
Federated GNMA	9.92
Vanguard Fixed-Income GNMA	9.83
Liberty High-Income Bond	9.80
Kemper High-Yield	9.80
Shearson Global Bond	9.78
Average for 220 funds	8.09

FIVE-YEAR BEST: TAX-FREE BOND FUNDS

	Average annual return
UST Master Tax-Exempt Long-Term	10.20%
Rochester Fund Municipals	8.73
Franklin High-Yield Tax-Free Income	8.37
SteinRoe High-Yield Municipals	8.21
Fidelity Aggressive Tax-Free	8.20
Eaton Vance Municipal Bond	8.18
SAFECO Municipal Bond	8.12
Vanguard Municipal High-Yield	7.99
Elfun Tax-Exempt Income	7.97
Seligman Tax-Exempt Louisiana	7.95
Scudder Managed Municipal Bonds	7.95
SteinRoe Managed Municipals	7.92
Lord Abbett Tax-Free Income NY	7.90
United Municipal Bond	7.90
Lord Abbett Tax-Free Income National	7.89
Average for 257 funds	6.77

*Appreciation plus reinvested dividends and capital gains through Nov. 30

DATA MORNINGSTAR INC

ugh Oct. 31. By contrast, $158.1 bil- in new money came in during the rd year of 1986.

hose investors who left the low re- s of bank CDs for high-yield and con- ible bonds were not disappointed. r a wave of defaults in 1990, inves- regained confidence in the junk- l market in 1991. One reason: a ris- stock market, which made it easier companies with junk outstanding to e equity and reduce debt, thus mak- their high-yield bonds less risky. The in equities also lifted prices for con- ibles, which are linked to the stock ket. By any standards, returns of ds such as Dean Witter High-Yield urities, up 67.08% for the year, were zling, but their performance was all more striking compared with 1990, n junk bonds were at the bottom of heap. Other top performing fixed- me funds included Liberty High-In- e Bond, up 57.98%, AMEV Advantage h-Yield, ahead 56.46%, and National d Fund, with a 51% return.

TRIO. Leading the list of stellar d-income funds for the five years ng Nov. 30 were a trio of funds that st in zero-coupon bonds. Benham get Maturities 2005 had an average ual return of 13.72%, followed by ham Target Maturities 2000, with 1%, and Benham Target Maturities 5, with 12.41%. Because zero-coupon ds are sold at a discount and repaid ull at maturity, they are very sensi- to interest-rate changes. Falling in- st rates since 1989 have buoyed the rns of zero-coupon funds, but they d take a tumble if rates turn up in. Says Michael Lipper, president of per Analytical Services in Summit, .: "If you invest in zero-coupon ds, it's best to do it for the long n."

While investors in biotech, small-cap, high-yield mutual funds look back tentedly on 1991, those who put their ney in precious metals and natural- ource funds are licking their wounds. worst performing fund for the year Fidelity Select Energy Service, n 24.96%. It was followed by State- Gold/Minerals, down 24.92%, and Life-State Street Global Energy, off 4%. Although there is no promise on ll Street that the last shall be first, obs of *The No-Load Fund Investor* s: "Investors should pay attention to funds at the bottom as well as the " Jacobs isn't expecting a rally in cious metals stocks, but he thinks the es for oil issues, for instance, have en so low that they are ready for a ound. Maybe the managers at Fideli- Select Energy Service and others who sed out on the action in 1991 should a case of champagne, just in case.

By Monica Roman in New York

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*According to Lipper Analytical Services, Magellan ranked #1 out of 362, #3 out of 453, #59 out of 979, and #205 out of 1796 funds for the 15, 10, 5, and 1 year periods ended 9/30/91, respectively (portfolio manager changed 6/1/90).

1-800-544-8888 24 hours

Fidelity Magellan Fund. For more complete information including management fees and the fund's 3% sales charge and expenses, please call or write for a free prospectus. Read it carefully before you invest or send money. Fidelity Distributors Corporation, P.O. Box 660603, Dallas, TX 75266-0603.

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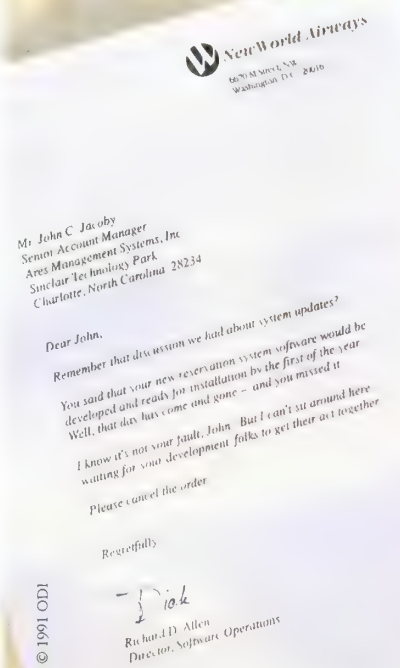

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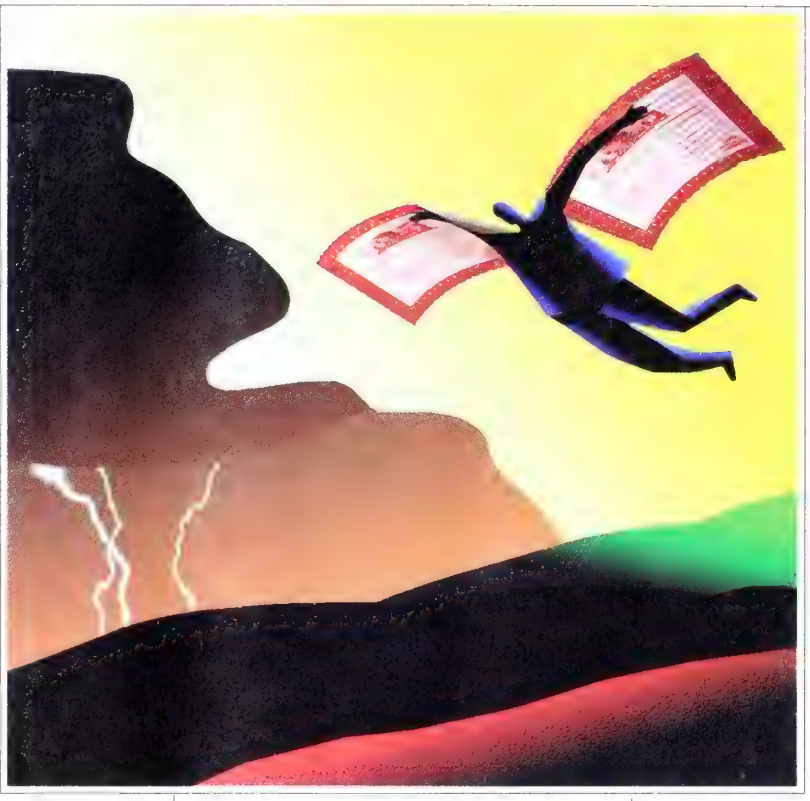
RATES SHOULD STAY LOW. THEN AGAIN, A TAX CUT COULD SPOIL THE FUN



The bond market's five-month rally is winding down, but the party isn't over yet. Interest rates should stay low and could slide lower over the next few months. "More economic malaise, low inflation, and another round of Fed easing is an environment made to order for bonds in the new year," says Hugh A. Johnson Jr., chief investment officer for First Albany Corp. Certainly, the consensus is that rates will stay low (chart). But playing the market will not necessarily be a slam dunk. A stronger-than-expected recovery, perhaps propelled by large election-year tax cuts, could blow apart the bullish scenario.

No question, bonds have performed spectacularly since the Federal Reserve began pushing down rates last summer. Lehman Brothers Inc.'s T-Bond index, which measures total return (price appreciation and interest income), was up 12% in 1991, with three-quarters of that coming since Aug. 1.

When a recovery finally shows up, around mid-1992, it should be sufficiently anemic to make rates edge up just slightly. According to a consensus of economists compiled by *Blue Chip Financial Forecasts*, the three-month Treasury bill, now 4.2%, will slide a tad more before ending 1992 at 4.9%. That's still far below the 6% with which 1991 began.

UNKIND CUT. Long-term rates, whose downward drift has been glacial during 1991, should continue that slow southerly pace until midyear 1992, then inch up just a bit. The Fed's easing is effective only at the short end of the yield curve. One reason that longer rates have budged only grudgingly is that comparable interest rates overseas are relatively high. Result: Longer U.S. rates must stay attractive enough to enlist buyers. A 10-year U.S. Treasury bond yields 7.75%. The similar security in Germany is 8%; in Japan, 6%.

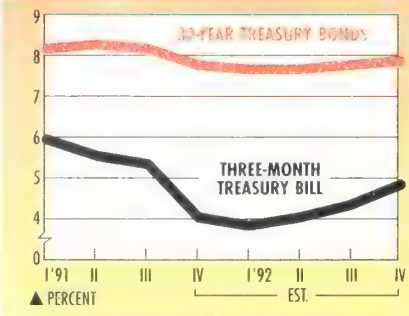
A big tax cut next spring, though, could be kryptonite for bonds, swelling the federal deficit and kicking up inflation and interest rates. Each time the Administration muses about lowering taxes to jump-start t stalled recovery, t credit markets gyrat "The government busy going around sc ing the bond market complains Paul Boltz, chief economi for T. Rowe Price Ass ciates Inc., the mutu fund group. "Thank Washington."

CALL RISK. But odds a that any tax cut wo be sufficiently big hurt bonds. Washingt savants are forecasti a smallish decrea worth perhaps $10 b lion to $15 billion (pa 66). "A Republic White House won't a cept anything serious harmful," says Steph A. Maher, a Nikko S curities Co. executi vice-president.

A prudent strategy deal with this uncerta ty is to hide in intern diate securities, ranging from 5 to years in maturity. "Where price chang are concerned, the 30-year bond is twi as sensitive as the 7-year note," sa Martin J. Mauro, a senior economist Merrill Lynch & Co. More venturesor souls should go for the longer maturit if rates keep sinking. The trick is to c the turn, moving to the short end of t yield curve—maturities of less than 5 years—when rates begin to rise.

Continuing low rates remain a pr lem even for those investors who a lucky enough to be holding old hig coupon bonds. They must contend with gremlin known as call risk: Issuers deem high-paying paper before matur and refinance at lower rates. In the th quarter of 1991 alone, U.S. corporatio refinanced $22 billion, five times t amount done in 1990's third period, sa Securities Data Co. That's a revoltin development for those who boug bonds in the early 1980s paying doub digit interest. Many such investors, cluding retirees who built their lifesty

SLOW RECOVERY SHOULD KEEP INTEREST RATES LOW



DATA: MERRILL LYNCH & CO., BLUE CHIP FINANCIAL FORECAST, BW

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The earlier you use Rogaine, the better your chances of growing hair.

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Vhat are the early warning igns of losing hair?

Everyone loses a little hair. Fifty to 80 hairs a day is ormal. If you're losing more than 100 hairs a day without normal replacement, the first sign will often be thinning of the "crown" at the top of your scalp. See your doctor when you first notice it, because this small bald spot can grow larger over time.

I may not have grown any hair fter 6 months, but most of my air's stopped falling out. I'm ad I got to the doctor fast." -Luis Silva, 20

Two million men worldwide have tried *Rogaine*. In yearlong clinical tests conducted by dermatologists at 27 medical centers nationwide, virtually half (48%) f the men who tried *Rogaine* saw t least moderate hair regrowth. Thirty-six percent had minimal egrowth and only 16% had no egrowth.

Doctors also found that it usuly takes 4 months or more efore you can begin to evaluate our use of *Rogaine*. Side effects ere minimal: only 5% of the men ested had itching of the scalp.

"The first time I saw hair growing was at about 8 months. I hadn't lost much...*but I'm not taking any chances."—Tony Vila*

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Only a dermatologist or another doctor who treats hair loss can tell you, so see one soon. The sooner you get your prescription for *Rogaine* (which is now available in an economical 3-pack), the sooner you could be growing hair.

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Fill this in now. Then, start to fill in your hair loss.

Mr. Keith Barton, The Upjohn Company
PO Box 9040, Opa Locka, Florida 33054-9944

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Name_____

Address_____

City/State/Zip_____

Phone_____ Age_____

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For a summmary of product information, see adjoining page.

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TOPICAL SOLUTION minoxidil 2%

The only product proven to grow hair.

The only product ever proven to grow hair.

What is ROGAINE?

enough dose of tablet form is used to lower blood pressure certain effects that merit your attention may occur. These

Persons who use ROGAINE Topical Solution have a low level of absorption of minoxidil much lower than that of persons being treated with *minoxidil tablets* for high blood pressure. Therefore the likelihood that a person using ROGAINE Topical Solution will develop the effects associated with *minoxidil tablets* is very small. In fact none of these effects have been

How soon can I expect results from using ROGAINE?

studies have shown that the response to treatment with ROGAINE may vary widely.

Some patients receiving ROGAINE may see faster results than others others may respond with a slower rate of hair growth. You should not expect visible growth in less than 4 months.

If I respond to ROGAINE, what will the hair look like?

visible. After further treatment the new hair should be the same color and thickness as the other hair on your scalp. If you start with substantial hair loss the new hair should be of the same color and thickness as the rest of your hair.

How long do I need to use ROGAINE?

ROGAINE is a treatment, not a cure. If you respond to treatment you will need to continue using ROGAINE to maintain or increase hair growth. If you do not begin to show a response to treatment with ROGAINE after a reasonable period of time

What happens if I stop using ROGAINE? Will I keep the new hair?

If you stop using ROGAINE you will probably shed the new hair within a few months after stopping treatment.

What is the dosage of ROGAINE?

You should apply a 1-mL dose of ROGAINE two times a day once in the morning and once at night before bedtime. Each bottle should last about 30 days (1 month). The applicator in each package of ROGAINE is designed to let you apply the correct amount of ROGAINE with each application. *Please refer to the Instructions for Use.*

What if I miss a dose or forget to use ROGAINE?

If you miss one or two daily applications of ROGAINE you should restart your twice-daily application and return to your usual schedule. You should not attempt to make up for missed applications.

Can I use ROGAINE more than twice a day? Will it work faster?

not been shown to speed up the process of hair growth and may increase the possibility of side effects.

What are the most common side effects reported in clinical studies with ROGAINE?

Studies of patients using ROGAINE have shown that the most common adverse effects directly attributable Topical Solution were itching and other skin irritations of the treated area of the scalp. About 7% of patients had these complaints.

Other side effects including lightheadedness dizziness and headaches were reported by patients using ROGAINE or placebo (a similar solution without the active medication).

What are some of the side effects people have reported?

The frequency of side effects listed below was similar except for dermatologic reactions in the groups using ROGAINE and placebo. *Respiratory* bronchitis upper respiratory infection sinusitis. *Dermatologic* irritant or allergic contact dermatitis eczema hypertrichosis local erythema pruritus dry skin scalp flaking exacerbation of hair loss alopecia. *Gastrointestinal* diarrhea nausea vomiting. *Neurologic* headache dizziness faintness lightheadedness. *Musculoskeletal* fractures back pain tendonitis. *Cardiovascular* edema chest pain blood pressure increases decreases palpitation pulse rate increases decreases. *Allergic* nonspecific allergic reactions hives allergic rhinitis facial swelling sensitivity. *Special Senses* conjunctivitis ear infections vertigo visual disturbances including decreased visual acuity. *Metabolic/Nutritional* edema weight gain. *Urinary Tract* urinary tract infections renal calculi urethritis. *Genital Tract* prostatitis epididymitis sexual dysfunction. *Psychiatric* anxiety depression fatigue. *Hematologic* lymphadenopathy.

Individuals who are hypersensitive to minoxidil propylene glycol or ethanol must not use ROGAINE.

ROGAINE Topical Solution contains alcohol which could cause burning or irritation of the eyes mucous membranes or sensitive skin areas. If ROGAINE accidentally gets into these areas bathe the area with large amounts of cool tap water. Contact your doctor if irritation persists.

What are the possible side effects that could affect the heart and circulation when using ROGAINE?

Although serious side effects have not been attributed to ROGAINE in clinical studies there is a possibility that they could occur because the active ingredient in ROGAINE Topical Solution is the same as in *minoxidil tablets*.

Minoxidil tablets are used to treat high blood pressure. *Minoxidil tablets* lower blood pressure by relaxing the arteries an effect called vasodilation. Vasodilation leads to retention of fluid and increased heart rate. The following effects have occurred in some patients taking *minoxidil tablets* for high blood pressure:

Increased heart rate. Some patients have reported a resting heart rate increased by more than 20 beats per minute rapid weight gain of more than 5 pounds or swelling (edema) of the face hands ankles or stomach area difficulty in breathing especially when lying down a result of an increase in body fluids or fluid around the heart worsening of or new onset of angina pectoris.

When ROGAINE Topical Solution is used on normal skin very little minoxidil is absorbed and the possible effects attributed to minoxidil tablets are not expected with the use of ROGAINE. However you experience any of the possible side effects listed discontinue use of ROGAINE and consult your doctor. Presumably such effects would be most likely greater absorption occurred (e.g. because ROGAINE was used on damaged or inflamed skin or in greater than recommended amounts).

In animal studies minoxidil in doses higher than would be obtained from topical use in people has caused important heart structure damage. This kind of damage has not been seen in humans given minoxidil tablets for high blood pressure at effective doses.

What factors may increase the risk of serious side effects with ROGAINE?

Individuals with known or suspected underlying coronary artery disease or the presence of or predisposition to heart failure would be at particular risk if systemic effects (that is increased heart rate or fluid retention) of minoxidil were to occur. Physicians and patients with these kinds of underlying diseases should be conscious of the potential risk of treatment if they choose to use ROGAINE.

ROGAINE should be applied only to the scalp and should not be used on other parts of the body because absorption of minoxidil may be increased and the risk of side effects may become greater. You should not use ROGAINE if your scalp becomes irritated sunburned and you should not use it along with other topical treatment medication on your scalp.

Can individuals with high blood pressure use ROGAINE?

Individuals with hypertension including those under treatment with antihypertensive agents can use ROGAINE but should be monitored closely by their doctor. Patients taking guanethidine for high blood pressure should not use ROGAINE.

Should any precautions be followed?

Individuals using ROGAINE should be monitored by their physician 1 month after starting ROGAINE and at least every 6 months thereafter. Discontinue ROGAINE if systemic effects occur.

Do not use in conjunction with other topical agents such as corticosteroids retinoids petrolatum or agents that enhance percutaneous absorption. ROGAINE is for topical use only. Each milliliter contains 20 mg minoxidil and accidental ingestion could cause adverse systemic effects.

No teratogenicity was found with topical application. ROGAINE should not be used by pregnant women or by nursing mothers. The effects on labor and delivery are not known. Efficacy in postmenopausal women has not been studied.

Upjohn DERMATOLOGY DIVISION

The Upjohn Company
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BONDS

around fat, decade-old bond yields, ofte
don't know about call dates until issue
tap them on the shoulder. Treasury i
vestors are more fortunate: Federal go
ernment bonds issued since 1985 can't
called. For investors in other bonds, th
lesson is to check out not simply a se
rity's yield to maturity but also its yie
to-call date. When the bond gets calle
investors will have had time to ma
intelligent financial-planning decisions.

Although the Treasury market has
tracted many bond investors, other s
tors of the debt market also offer oppo
tunities. At first glance, investmen
grade corporate bonds don't seem th
alluring, mainly because they have be
showing a narrower yield spread late
over comparable Treasuries, which ha
no default risk. Hope for an econon
recovery has narrowed the spread
about 0.9 percentage point, from
points a year ago. The rationale is th
better times will decrease the chance
corporate credit downgrades and
faults. Unfortunately, the evidence f
optimism is mixed. The pace of dow
grades is indeed slowing. In the four
quarter, the ratio of Standard & Poo
Corp. downgrades to upgrades fell to
to 1, from 10 to 1 in the year-ago perio
On the minus side, 105 companies
faulted in 1991, almost the same
1990's gruesome tally, says the Bond
vestors Assn., which sees little improv
ment in 1992.

Yet certain corporate sectors are
ing quite well. T. Rowe Price calculat
that bank holding-company bonds ha
outdone the bond market as a whol
posting a 17% return in 1991. And tha
in the face of highly publicized real
tate woes besetting some banks. Sa
Edward A. Taber III, director of Price
taxable-bond division: "Investors ha
been rewarded for taking risk."

HIGH JUNK. For real risk lovers, the jun
bond market, which has had a gre
1991, beckons with its alluring coupo
many still double-digit (page 140). Pr
pects of a recovery have made ju
seem much less dangerous: The yi
spread over comparable Treasuries h
shrunk from 11.1 percentage points
1990 to 6.6 points now. And Wall Stre
which didn't want to know about junk
1990, has rolled out new issues at t
most rapid pace since 1988. With lu
some junk may ascend into the hea
realm of investment grades. On Dec
RJR Nabisco Holdings Corp. did exac
that when Standard & Poor's Co
boosted its rating to BBB–.

Municipal bonds have gotten a lot
attention during the past year becau
cash-strapped states have hiked inco
taxes (page 144). Munis have the virt
of being exempt from federal and oft

l levies. The volume of munis sold in 1 surged as state and local governnts refinanced older, high-coupon iss or raised money to rebuild crumg roads and bridges. The trend uld continue into 1992, making a lthy supply of munis available. One ning: Munis default, too. This past r has seen a bumper crop of that; 2 should be a little better.

or the fainthearted who nevertheless nt to do better than Treasuries, mort-e-backed bonds may be apropos. se are pools of individual mortgages ranteed or insured by federal agen- such as the Government National rtgage Assn. The spread over Treaes is a decent 0.9 percentage point— same as the spread for corporates, ch are more risky.

ADY SHIP. Mortgage-backed bonds e one problem, and it's a form of call : The underlying mortgages can be aid early as homeowners refinance at er rates, forcing the issuer to call the d. It's a peril even for a mortgage-

FEELING LUCKY?

TRY COLLATERALIZED

MORTGAGE

OBLIGATIONS

ked mutual fund, run by pros. "If a d has 50% or more of its mortgages louble-digit rates, that's likely to hap-," says Randall W. Merk, a vice-pres-t at Benham GNMA Trust Fund.

nvestors in mortgage-backed securi- with a taste for the wild side might k at collateralized mortgage obliga-s (CMOs), which repackage the stand bonds, such as Ginnie Maes, into tic configurations that only a com-er wizard can sort out. CMOs have a e range of mortgage prepayment : The higher the interest rate, the ner the risk. The least risky are ed "planned amortization class" Os, whose yields are better than Treaes but not as good as traditional rtgage-backed securities.

s always, diabolical fate can thwart n the best-laid plans of bond traders. erest-rate forecasts have an annoying it of being incorrect because the ecasters are usually unable to foresee h market-shaking events as oil cks and wars—or the impact of elec--year tax cuts. Burned in the past, d investors can only hope that the 2 market stays steady. And is at t halfway as profitable as the eu-ric one of 1991.

By Larry Light in New York

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ANOTHER FAT YEAR FOR JUNK MAY BE ASKING TOO MUCH

AS CREDIT QUALITY RISES AND YIELDS FALL, INVESTORS SHOULD BE WARY

Nineteen ninety-one was the first year in a long time when junk bonds didn't live up to their name. The market's total return rebounded a remarkable 42%. The average junk-bond fund soared 34% through November, 1991 (chart).

After such stratospheric gains, the market is ready to return to earth. "The fantastic returns of 1991 will not be replicated, so people should lower their expectations," says Richard S. Swingle, president of the T. Rowe Price High-Yield Fund Inc. He is looking for an 11% return in 1992. Joseph Bencivenga, high-yield research director at Salomon Brothers Inc., says if the economy worsens, returns could fall below 10%.

GROWN UP. Whatever happens, most analysts believe that over the past year, the market has become much more mature. In particular, the credit quality of new junk issues—bonds rated BB or lower—has increased. "The recovery in 1991 is showing for the first time, high-yield is a real viable market," says Robert S. Kricheff, high-yield research director at First Boston Corp.

It's easy to see why 1991 was a one-of-a-kind year. The lofty returns were largely a reaction to a dismal 1990, when the average junk mutual fund dropped 11%. The worst blow was the February, 1990, bankruptcy of junk bond leader Drexel Burnham Lambert Inc. The market was also beset by a flood of selling by thrifts and insurance companies forced by regulators to unload junk portfolios. Demand dried up as well as a jittery public backed away from junk-bond mutual funds. In early 1991, bottom-fishers, realizing the market had been beaten down too far, jumped in. Then individual investors seeking better yields began plowing money back into junk funds. By October, junk mutual funds had collected $2 billion, $319 million in that month alone.

The result is that the market is no longer severely undervalued. The junk-bond spread over Treasuries is 686 basis points, not the incredible 1,100-basis-point spread of a year earlier. The average yield to maturity has narrowed to 13.2% from 19.5%.

The flip side of lower yields is super or credit quality. Corporations a strengthening their balance sheets b refinancing higher-yielding junk de with the proceeds of equity initial publ offerings or lower-yielding junk. Sti investors will have to put up with r duced returns. The T. Rowe Pri High-Yield Fund expects to lose 18 of its assets in the first half of 19 as companies buy back their junk face value. The result: The fund's a erage coupon rate has declin from 13% to 11.15%. "It's good omen for the marke place, but near term, is a disadvantage shareholders," says Rowe's Swingle.

SPOOKED. There a broader reasons f investors to take a se ond look at junk. T $200 billion market more dependent tha ever on fickle public se timent. With long-ter institutional investor such as insurance comp nies, becoming less active, mut al funds have emerged as the sing biggest market participants. Estimat of their activity run from 43% to 7 of total daily transactions. Should t public get spooked and withdraw money from mutual funds, the ju market could drop even more quick than it has in the past.

Salomon's Benciveng who believes that positi headlines in 1991 attract investors into junk, n forecasts a decline in r money flows into ju funds. "Market sentime seems to be leveling off falling, vs. what has be a dramatic upsurge in c fidence and interest pr to the third quarter," says. If the public hea for the exits, that co just be another gold buying opportunity.

By Leah Nathans Spiro New York

JUNK FUND RETURNS: FROM AWFUL TO WONDERFUL

Name	Net assets* Millions	Total return 1990	Total return 1991**
PRUDENTIAL HIGH-YIELD B	$2,121	-9.23%	32.36%
PUTNAM HIGH-YIELD	1,858	-5.86	38.25
FRANKLIN AGE HIGH-INCOME	1,727	-14.91	46.36
KEMPER HIGH-YIELD	1,673	-12.98	46.95
VANGUARD HIGH-YIELD	1,285	-5.85	27.07
FIDELITY CAPITAL & INCOME	1,111	-3.84	28.48
IDS EXTRA INCOME	1,009	-10.63	37.03
T. ROWE PRICE HIGH-YIELD	924	-10.96	29.53
UNITED HIGH-INCOME	826	-14.78	35.70
KEMPER INVESTMENT HIGH-YIELD	789	-15.70	46.17

*9/30/91 **11/30/91 DATA MORNINGSTAR INC

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solutely essential to
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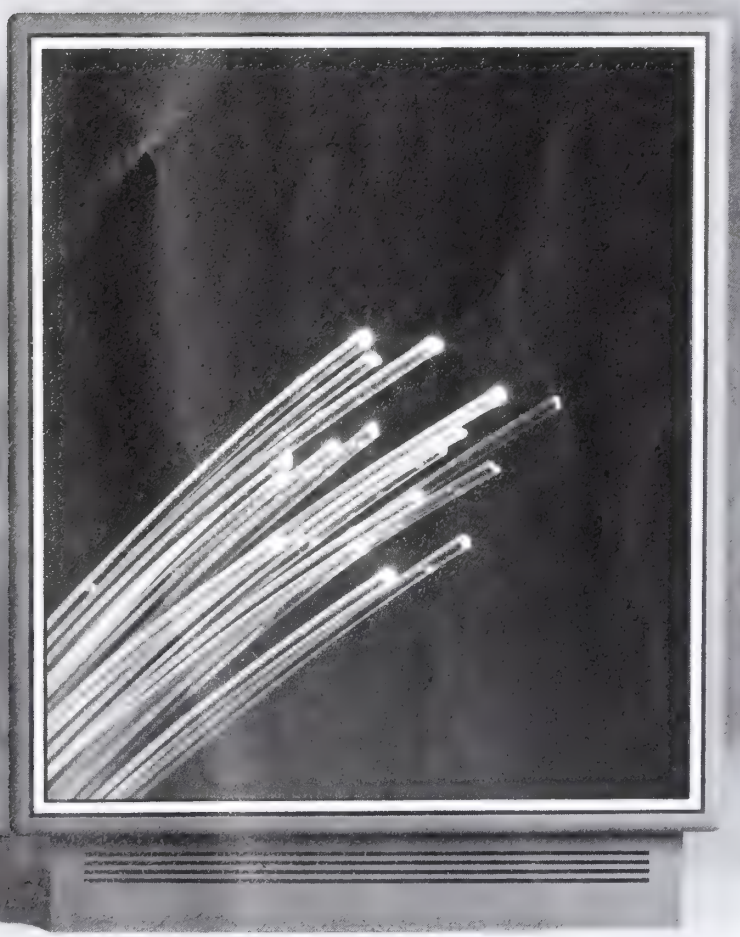

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MUNIS, MUNIS EVERYWHERE —BUT BUYER BEWARE

DON'T LET ENTICING TAX-FREE YIELDS BLIND YOU TO THE CREDIT RISKS

There's good news and bad news for investors in tax-exempt municipal bonds. The good news is that munis are becoming an even more attractive tax shelter, as many states introduce or raise personal income taxes. The bad news is that munis are becoming more risky, as the fiscal pressure on states and cities grows and their credit quality deteriorates.

That means more homework for investors. Fortunately, there are many issues to choose from. Revenue-starved cities and states are racing into the market to address long-delayed infrastructure needs. And with interest rates now so low, they are refinancing to save borrowing costs. New issues reached $165 billion in 1991, up 32% from 1990.

ENTICING. There has been plenty of demand, too. As ample supply has depressed muni prices, Treasury prices have rallied because of a lack of supply. That caused even pension funds and other tax-exempt investors to move from taxable bonds into 10-year to 15-year tax-frees. "By early February, those munis will have a total return of 1% to 2% higher than Treasuries," notes David J. Madigan, municipal strategist at Merrill Lynch & Co.

Such investors are expected to move back into taxable bonds in early February. The demand from individuals is expected to increase, however. "We see very strong demand in 1992, with many people with too much money in short-term instruments where yields are collapsing," says George D. Friedlander, director of municipal research at Smith Barney, Harris Upham & Co. He also sees demand increasing as bond calls shrink the overall muni market, which he figures will be 25% smaller by 1995.

In this low-rate environment, there are still enticing yields on municipals. Top-quality 10-year general-obligation bonds yield about 5.8%, equal to 8.41% on a taxable investment for those in the top tax bracket. On a similar 20-year bond, the yield is 6.55%, equal to a 9.49% taxable yield. Investors buying in-state bonds can often avoid state and local taxes, too. A New York City resident in the top tax bracket who is filing jointly needs a taxable yield of 11.57% to match the 7% yield on a New York City bond.

Investors should not let their healthy skepticism be overcome by the siren song of higher yields. "Until there is a clear upward trend in the economy and in employment, you will see additional fiscal stress on cities and states," says Howard D. Sitzer, director of municipal research for Greenwich Partners Inc. During 1991, Standard & Poor's has downgraded five times as many issues as it has upgraded. A recent action was the rating change of the $15 billion in California general obligation bonds from AAA to A.

Defaults were also heavy in 199 Over $4.5 billion worth of munis defau ed, says the Miami-based Bond Investo Assn., up from $1.8 billion in 1990. Th figure includes technical defaults and d faults covered by third-party guara tees, as well as actual miss payments. Most analysts do foresee such a huge doll amount of defaults in 1992.

PLAIN VANILLA. Researchi what bonds offer the best r ward for the risk is crucia "The best performance shou be in the 10- to 15-year area says Madigan. That's becau longer-term munis are pric close to their average re tionship to Treasuries, wh shorter bonds are cheap than they've ever been.

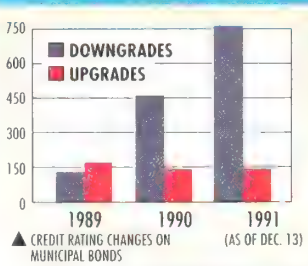
Many people like insur bonds, which are backed AAA-rated insurance comp nies that promise to ma timely payments of intere and principal if an issuer d faults. Essential-purpose re enue bonds, such as utility water issues, are viewed safe. Friedlander likes AA-r ed Los Angeles Water & Pow Dept. bonds, yielding 6.8% a due in 2031.

For those who want diversi there are muni-bond funds. Acco ing to Morningstar Inc., the mutual-fu rating service, the universe of 373 gen al muni-bond funds it tracks had a to return of 9.52% through the end of N vember, and an average yield of 6.27

You can't dispute munis' tax appe But with revenu down and spending governments are m pressured than ev Investors who do th research may find b gains. Investors w don't keep track their investments m be in for some na surprises.

By Suzanne Wool in New York

RATING DOWNGRADES HIT A NEW PEAK



▲ CREDIT RATING CHANGES ON MUNICIPAL BONDS

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MAYBE IT'S TIME TO PUT A FUTURE IN YOUR PORTFOLIO

DESPITE SOME RISK, MANAGED FUNDS ARE GAINING FAVOR

Investors have long bought into the gospel of diversification, guarding against market shocks by carefully apportioning their capital into stocks, bonds, options, precious metals, and real estate. But except for a few adventuresome souls, futures were almost always left out of the mix.

There are signs, however, that investors are losing some of their shyness when it comes to the risky futures market. Professionally managed commodity pools and public funds, which deal in financial and agricultural futures contracts, are now one of the fastest-growing sectors of the investment spectrum. These futures portfolios currently have some $25 billion under management, according to the Managed Futures Assn., an industry trade group. That's a far cry from, say, the $338 billion that the public has poured into stock funds. But the amount is still up a healthy $10 billion from 1989.

Commodity trading advisers, who generally manage both private pools and public funds, say investors are eager to find new opportunities in futures, especially as interest rates have fallen. What's more, by selecting a managed account that spreads its investment over a number of different types of futures contracts, an investor can reduce the odds of big losses in what is viewed as an extremely treacherous market.

BAD YEAR. Ironically, the growing popularity of futures comes at a time when futures portfolio managers are showing decidedly poor results. The 161 domestically traded futures funds had an average loss of 7.6% in the first 10 months of the year, according to *Managed Account Reports*, a New York-based newsletter that tracks the industry. That's far from the banner year of 1987, when futures funds showed a 40% return.

Although some futures managers study fundamentals, such as inflation and political developments, most are so-called "trend-followers." Using sophisticated computer programs, they track technical developments, such as price movements and trading volume, on a variety of futures contracts. When they think they have identified a sustained trend, they buy and sell accordingly.

This year, however, was full of surprises and sudden price swings. Just as traders set their systems to follow the strong dollar and rising oil prices during the Persian Gulf war, the ground war suddenly ended. Then, by the time they responded to the August coup in the Soviet Union, Mikhail Gorbachev w back in Moscow.

Looking ahead to 1992, fund mana ers expect more tough times. Barring major weather shock, agricultural pric aren't likely to move much. The tren taking shape in financial futures—sto indexes, currencies, and debt inst ments—also aren't powerful enough give funds major profit opportuniti For example, most forecasters expe that U. S. interest rates will continue decline. In theory, this could propel f eign currencies when measur against the dollar, but futu fund advisers aren't sure h long the trend will la

POOL PARTY. Even in b times, there's usually number of manage who pull off stell performances. Sjo Ir for example, generat an average return 67% for its custome (table). The Chicag based commodity tra ing adviser invest heavily in foreign fina cial instruments, par ularly Australian g ernment securities.

When scouting arou for opportunities in t futures market, indiv uals must first choose tween a private pool or a fu

Pools are limited partnerships th are marketed to well-heeled investo Advisers usually want a steep minim investment of $25,000 to $150,000 a limit pool membership to 35 investo By contrast, public funds require an tial investment of as little as $2,000. T funds are also sponsored by major b kerage houses, such as Dean Wit Reynolds Inc. or Merrill Lynch & C although the firms generally hire o side trading advisers.

Public funds, however, are often m complex than pools. Because of the r associated with the futures market, Securities & Exchange Commission quires an unusual degree of disclos that includes a complete history of public funds ever manged by the trad

EVEN IN BAD TIMES, THERE ARE MANAGERS WHO PULL OFF STELLAR PERFORMANCES

ser. Unlike a stock mutual fund, the pectus for a commodity fund may to 300 pages.

osts are another feature that inves- should examine closely. Public ds, in particular, can be expensive. front sales charges, or loads, can av- ge 4% of an individual's initial invest- t. On top of this, trading advisers t a management fee that's equiva- to roughly 1% of the fund's invest- t. Almost all advisers also want an ntive fee that ranges from 1% to 3% successful trading. Investors who e the fund early are often charged xit fee. Fund advisers say the active ing required in the futures market unts for the hefty charges. Still, all the fees are tallied, they often al close to 20% of the investor's ds.

isk is another yardstick that individ- should use in evaluating futures. ough the market itself is inherently

MANAGED FUTURES: ONLY A FEW BIG WINNERS

nager	Rate of return*	Assets** Millions
O (FOREIGN FINANCIAL)	67%	$14.0
SIGHT ENTERPRISES	48	16.8
ANG-CROWELL LOBAL FINANCIAL)	42	49.5
NNETH E. ORR PORTFOLIO)	25	42.3
NRY LUK	19	20.0
ANG-CROWELL IVERSIFIED)	18	73.3
LORADO COMMODITIES URRENCIES/FINANCIAL)	16	35.9
ROSE INVESTMENTS	16	20.5
O. MANAGEMENT NANCIAL/METALS)	16	80.0
NES COMMODITIES (LIQUID)	15	13.8

*First 10 months of 1991
**Includes both private pools and public funds
DATA: BARCLAY TRADING GROUP

tile, some funds and pools try to t risk. Some trading advisers keep a chunk of their funds in Treasury to guard against big swings in re- s. LaSalle Street Futures Fund, with 9.7% gain last year, was ranked ng the top 10 both in total return in risk avoidance. LaSalle kept ghly 80% of its $4.2 million portfolio sted in Treasury securities.

espite the uptick in their popularity, aged futures still look decidely un- etizing when compared to the re- s on stocks and bonds. But if trad- advisers can pull off the kind of ar performance they had in 1987, a more investors are bound to take the res plunge in 1992.

By David Greising in Chicago

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TOO ROUGH OUT THERE? YOU CAN HIDE BEHIND THE HEDGES

OPTIONS SUCH AS THE NEW 'CAPS' CAN BUY SOME PEACE OF MIND

Remember Nov. 15? That's the day the Dow Jones industrial average tumbled 120 points, the single biggest stock market plunge in two years. The drop, which wiped out the gains of many investors, was a bitter reminder that the market remains highly volatile and unpredictable.

As investors gear up for 1992, they should realize that there are ways to partially protect their portfolios from the vicissitudes of the marketplace. Professionals have long used complex option strategies to hedge their investments. Several option instruments are available to those seeking peace of mind in both the stock and bond markets.

Caps are the latest products to come down the pike. Traded on the Chicago Board Options Exchange since November, Caps guard against a drop of 30 points over a three-month period in the Standard & Poor's 100-stock index, which currently trades at 360. That translates into about an 8% fall, a sufficient degree of insurance even in volatile conditions, according to experts. "Before, if the market ran away, everybody was scrambling," explains Tom Hart, vice-president of PaineWebber Inc. "If I have a Cap, I've got some protection."

Caps are fairly straightforward. If the holder of a portfolio with, say, $36,000 in stocks begins worrying about a dip in the market, the investor can buy a "put" Cap, which gains value as the S&P index declines. The February Cap, for example, has a strike price of 360—the price at which the holder of a put begins receiving portfolio protection. If at any time before the option's mid-February expiration, the S&P index slides to its "cap" price of 330—30 points below the strike price—the investor automatically receives the Cap's full value of $3,000. That's $100 for each point the index declines below the strike price (table).

A February Cap currently costs about $800. That might appear expensive. But it's cheaper than a put on the standard S&P 100 option, commonly referred to as the OEX. A February OEX put, with a 360 strike price, costs about $1,000. Unlike the Cap, that put option has no downside limit, so if the index falls below 330, say to 300, the purchaser is protected all the way down. The CBOE is expected to introduce a new series of Caps with a lower strike price.

BIG CONCERNS. For bond investors, the CBOE's LTX, or long-term interest rate, options offer the investor a hedge against changes in interest rates. That's a big concern for anyone from a speculator holding zero-coupon bonds to a parent purchasing bonds to finance a child's college education. Pricing of the LTX options is based on three separate classes of government securities: 7-, 10-, and 30-year bonds.

Bond owners who fear an increase in interest rates might consider the purchase of a February LTX call option with a strike price of 72.50, derived from the "blended" rate of 7.25%. This call option is selling for $250. If interest rates rise and the LTX index climbs to 82.50 before the February expiration, the 72.50 call would be worth about $1,000, netting the investor $750 after commissions. If, on the other hand, interest rates fall, the option would expire worthless, but the bonds in the investor's portfolio would increase in value.

MATCHING OPTIONS. The difficulty with LTX options is in matching the right number of options to the investor's holdings. Because of the blended rates in the LTX contracts, it's not easy devising a one-for-one match against an investor's bond holdings. What's more, there's no single security that has a life span that exactly matches the LTX index. "The only thing you can do," says Michael Schwartz, senior vice-president at Oppenheimer & Co., "is to see if you're hedging against a one-point increase in rates."

To hedge against rising interest rates, an investor could also turn to the futures market. A put option on Treasury bond futures, traded at the Chicago Board of Trade, gives the purchaser the right to sell a futures contract at a set price until the option expires. At current market prices, the investor would pay $1,220 for the right to sell a March futures contract on a $100,000 30-year bond that carries a rate of 8% at par, or $100,000.

Since rates on long-term bonds are 7.75%, that contract is selling right now at $100,687. If rates rise to 9% by March, the value of the futures contract will fall to $89,687. The put option will be worth $10,313, since it allows the investors to sell the T-bond future for $100,000. This helps the investor to offset the loss in the worth of the bond portfolio.

It's true that such protective strategies make investing more complicated and costly. But in volatile markets, hedging your bets may be worth it. Just ask the victims of Nov. 15.

By David Greising in Chic

DONNING A CAP

You are an investor with a $36,000 stock portfolio that moves in tandem with the Standard & Poor's 100-stock index, currently trading at 360, and want to guard against a market decline

HERE'S WHAT TO DO

Buy one February 360 put Cap. This put option on the S&P 100 builds value as the stock index moves below 360 but is capped at a 30-point decline. Each one-point decline in the index is worth $100, with a maximum value of $3,000

HERE'S WHAT CAN HAPPEN

▶ If the S&P 100 drops as low as 330 by February, or 8.4%, the stock portfolio declines $3,000, to $33,000. But the Cap's value rises to $3,000. You lose $800, the price of the option

▶ Suppose the S&P 100 drops to 320, a decline of 12.1%. The value of the portfolio falls by $4,000, to $32,000. The Cap's value rises, but only to $3,000. You lose $800, the cost of the option, plus $1,000 from the decline in the portfolio

▶ If the S&P 100 rises, you lose the $800 cost of the Cap, plus any commissions. But that can be made up by an increase in the portfolio

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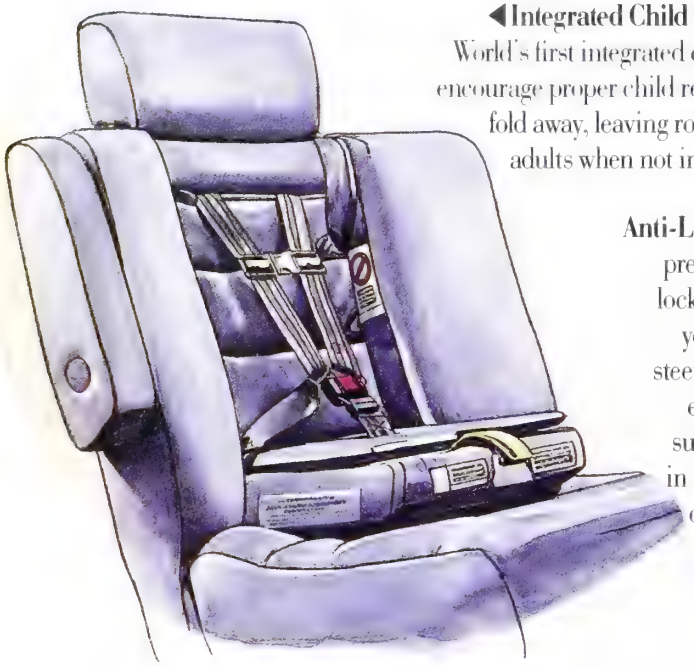

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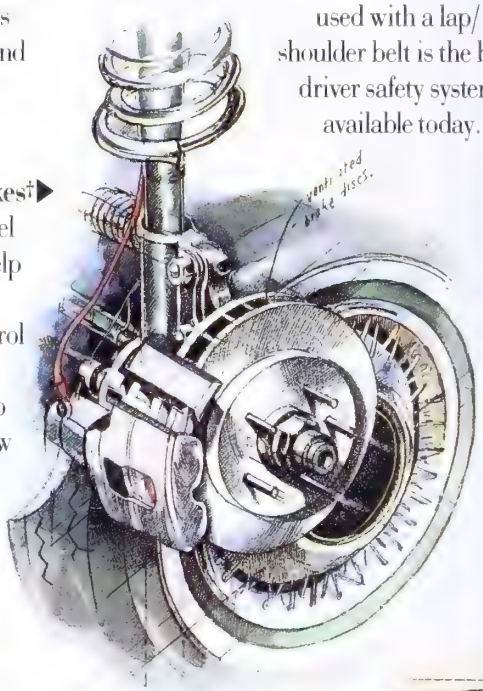

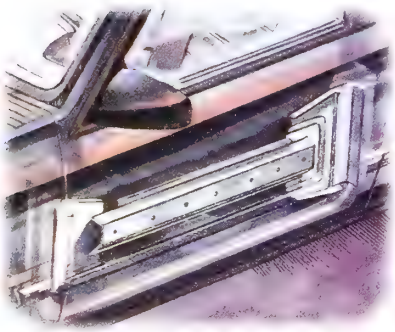

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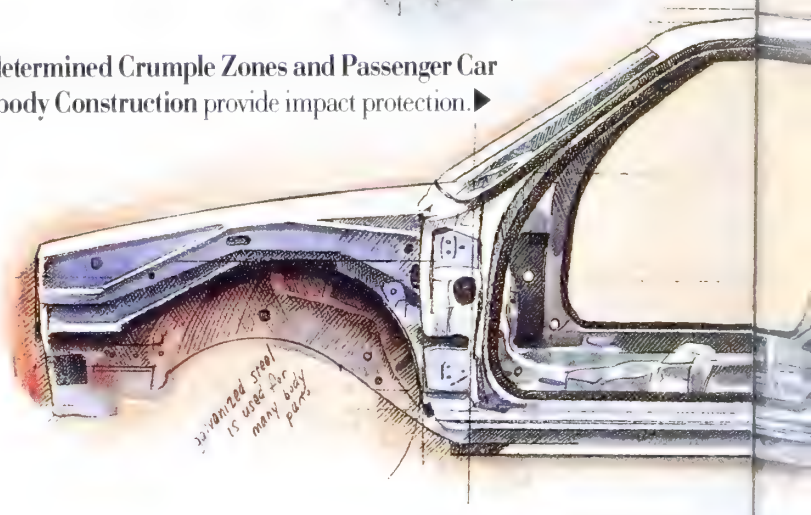

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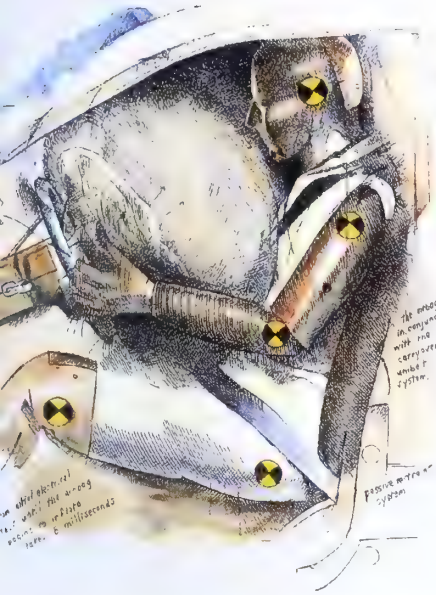

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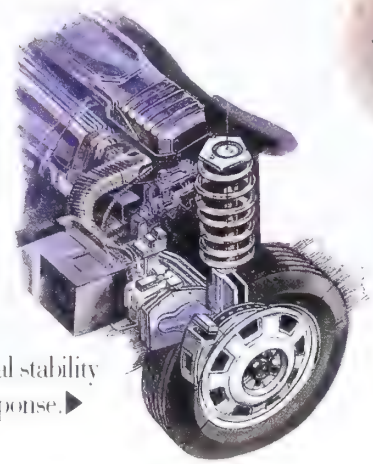

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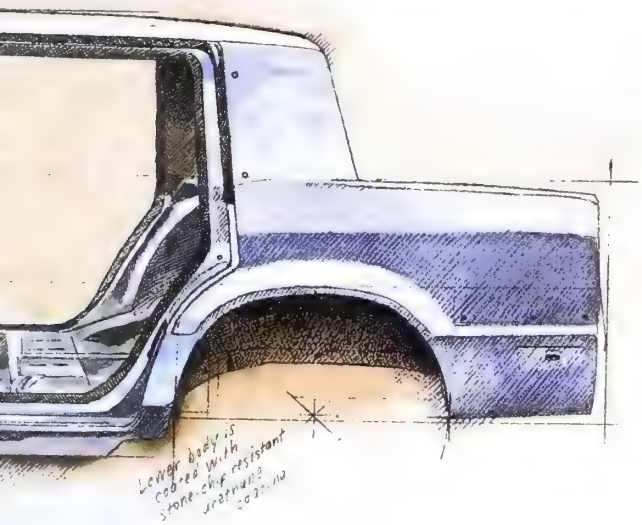

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PICKING THROUGH THE DEBRIS —VERY CAREFULLY

FEW WILL MAKE KILLINGS, BUT THERE ARE CHANCES FOR MODEST GAINS

The slow-motion train wreck that is real estate continues. The bold plays of the 1980s—when home prices and office rentals spurted higher every year—are just haunting memories. The outlook now is a continuation of the disaster in commercial properties counterbalanced by an extremely modest comeback for housing (chart). But there are a variety of ways to make or at least save money amid the debris in 1992. While few will make a killing in the residential market, easing mortgage interest rates and a slow recovery in the economy will produce opportunities. And even the commercial sector, whose overcapacity woes will linger for years, has some bright spots to exploit.

Home sellers, whose houses lingered unsold for endless months, at last should find their task easier. Sales, on the downswing since 1988, will head up in 1992 because the recession's end will remove some of the anxiety of big-ticket purchasers. "Consumer psychology is important when you're talking about this kind of money," says Leonard Miller, chairman of Lennar Corp., a Miami-based homebuilder. Sales will also get a helping hand from mortgage rates, which are at the lowest level in 14 years—8.8% for a 30-year fixed-rate loan—thanks to the Federal Reserve Board's recession-fighting efforts. Odds are that rates will dip still lower in the first part of 1992.

SLOW GOING. Sellers should also benefit from improving prices. During 1989 and 1990, inflation outstripped housing appreciation. In 1991, prices nationally inched above inflation. In 1992, they should beat inflation handily. National figures, however, mask the ongoing d tress in the Northeast and Californ where prices, overheated in the 198 are still dropping. According to the N tional Association of Realtors, an av age single-family home in the Northe fell from $145,200 in 1989 to $136, last October. "The Northeast will co back," says John A. Tuccillo, chief ec omist for the NAR, "but it will be slo Home values in the Midwest and Pacific Northwest, which didn't go cra in the past decade, will continue th languid yet reliable advance.

Auctions are gaining popularity a way to move housing in sticky sales vironments. From the sellers' sta point, the downside is that they'll lik have to part with their place on cheap. For buyers, the best bargains found among foreclosed property in

ds of banks or the Resolution Trust
p., the federal agency handling the
ngs and loan imbroglio. The banks
the RTC want to get the inventory
their books as expeditiously as possi-
The J. P. King Auction Co., for in-
ce, earlier this year sold 30 Milford
n.) condominiums for an average of
000 each. Before the bank foreclosed
he project, the few units sold were
g for twice that amount.
or those who want to stay put, mort-
e refinancing is alluring. The time to
though, is the first part of 1992.
es, which were at 10.4% for a 30-year
d loan in mid-1990, should keep fall-
—perhaps to 8.5% by this summer.
n, the recession should finally be
and rates are likely to jog north-
d again. When does refinancing
e sense? Generally, if rates are two
ts below what the owner is paying
. Unfortunately, refinancing doesn't
e without pain; it involves legal fees,
searches, and appraisals. Not to
tion the lender's points, which usual-
un about 2% to 3% of the loan.

Y PLAY. Sad to say, not everyone
swing a refinancing, particularly if a
e's value has shrunk. That hits hard-
when a house was bought at the
ket's peak, in the mid-1980s. For
y such owners, the present loan now
eds 80% of the home's worth. At
point, many lenders will refuse to
over a loan. There are two solutions.
more expensive is to pay off a
ık of the existing loan to bring it
er the 80% threshold. Depending on
meowner's situation, that could take
000 or $20,000. Less costly, at least
ne short run, is to offer to take out
ate mortgage insurance, which costs
at $300 to $500 annually. This gives
lender the assurance of being repaid.
lthough residential real estate re-
ns problematic, the most dramatic
s and rewards are in the commercial
ket. The game there is to pick up a
gain in a location that will turn
nd in the next two years, not the
six. Citicorp Real Estate Invest-
t Management, which manages mon-
for pension funds and other institu-
al investors, believes that spot is the
thwest. "The turn has come," says
hony T. Niosi, a Citicorp vice-presi-
. "And space there still is so damn
p." In Houston, where Niosi's group
been making heavy bottom-fishing
s, the office vacancy rate is now
—still unhealthy but showing im-
vement from the peak of 22% in 1987.
the optimism about the Southwest?
ok its lumps early, prompted by the
ust of the mid-1980s.
n uptrend is far distant elsewhere in
country, with the worst prospects in
Northeast. In lower Manhattan, va-
ies were 10% in 1987 and are at 19%

today. This is hurting even the legendary Reichmann family of Toronto. Take the 30-story office tower at 60 Broad St. that they partly own. The major tenant, Drexel Burnham Lambert Inc., went bust, so the place is 65% vacant. It now carries a $160 million mortgage. By contrast, the Reichmanns value the building at about $117 million, and even that figure, observers say, is too sanguine.

BETTER BET. Real estate investors lacking the billionaire Reichmanns' resources often play the game through various pooled investment vehicles, but few of these warrant attention nowadays. One to be especially leery of is the once popular real estate limited partnership that owns a portfolio of buildings. RELPs are in disrepute lately because many of them were structured as tax shelters—an advantage that the 1986 tax reform removed. The properties that these RELPs hold are too often dogs. Many failing partnerships are being gobbled up by large entities at the expense of RELP investors, who are often lucky just to get half their money back.

A better bet is the real estate investment trust. It also owns buildings, deriving income from rents. Unlike a RELP, which is difficult to trade, a REIT is very liquid; shares are bought and sold on stock exchanges. While not all REITs are performing well, a number have done superbly by targeting lucrative niches. Weingarten Realty Investors, which specializes in shopping centers anchored by discount grocery stores, enjoyed a 13% leap in earnings in the third quarter vs. the same period in 1990. Health care REITs are also hot, most notably in the burgeoning nursing home industry. Says Catherine C. Creswell, an analyst for Alex. Brown & Sons Inc.: "They've had 20% returns every year for the past five years." One standout is Health Care Property Investors Inc.

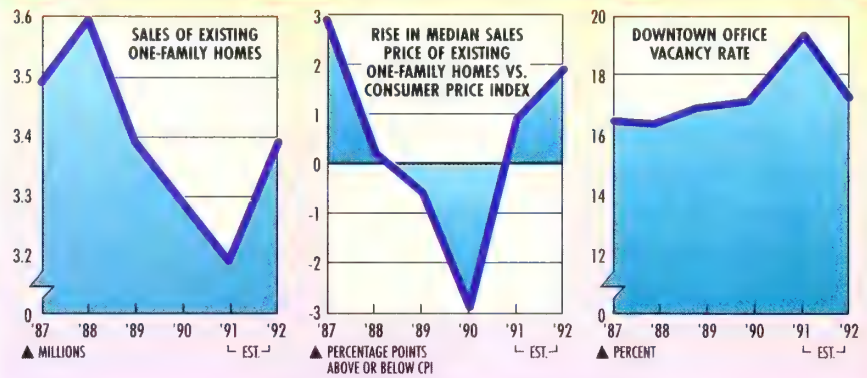
Investors should regard more warily REITs that concentrate on office and industrial buildings. Copley Properties Inc. lost 10¢ a share in the third quarter, and the stock has fallen 25% since midyear, to just under $9. Creswell speculates that the $1.20 dividend will be cut. The company says the difficulty stems from nonpaying tenants, who are being replaced, and that the REIT will rebound in a year or so. A possible coming problem is Rockefeller Center Properties Inc., which holds the mortgage to the fabled Manhattan office complex. Although the center is 95% occupied now, a worrisome 40% of the leases end in 1994. Wall Street, fearing that tenants will leave for cheaper space, has bid down the share price by 18% since June, to $15.50. The REIT argues that the mortgage is safe and says renovations and the complex's cachet will retain tenants.

Buying shares in selected homebuilding companies is a more conservative, and potentially profitable option. The expected pickup in home sales has already benefited Lennar, whose stock has doubled to $29 since June. Other winners have been Hovnanian, Toll Brothers, and Ryland. Their secret was to avoid taking on too much debt and owning too much vacant land, so they could weather the bad times. Others, such as U. S. Home Corp., did the opposite and ended up in Chapter 11.

As an investment, real estate demands the longest-term outlook. "This century has seen three real estate booms: the 1920s, the 1950s, and the 1980s," says Donald H. Straszheim, chief economist at Merrill Lynch & Co. "The next one is due in 2010." Get ready.

By Larry Light in New York

HOUSING SALES ARE REVIVING... ...AND HOME PRICES NOW OUTSTRIP INFLATION... ...BUT THE OFFICE GLUT PERSISTS



DATA: NATIONAL ASSOCIATION OF REALTORS, CB COMMERCIAL GROUP INC., BW

IN THE SOUTHWEST, 'THE TURN HAS COME. AND SPACE THERE STILL IS SO DAMN CHEAP'

PAUL GRANGE/BW

"What Should
To Save Fo

Today people are taking better care of themselves and living longer, which obviously means longer retirements, too. And you probably will want to maintain an active lifestyle after you retire, rather than worrying about whether your finances will last.

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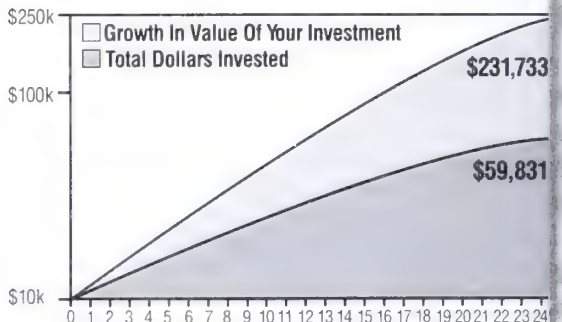
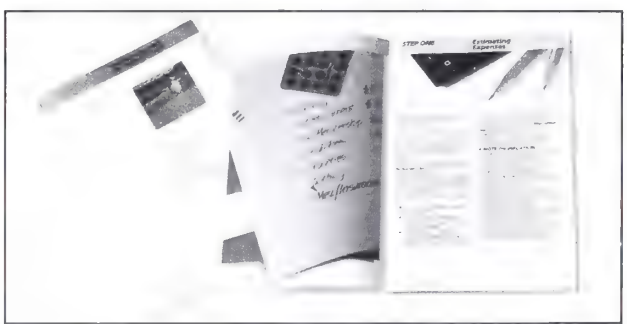
The key to effective retirement planning is making the most of the time you have. Start now to give your retirement savings as much time as possible to grow, taking full advantage of the power of compounding over the long term.

Fidelity's "Step By Step Guide To Planning For Retirement" can help you get started. Inside you'll find practical help in putting together your own personal retirement strategy.

Beginning Early Can Give You Head Start On Your Savings Go



This hypothetical chart shows the result of a retirement savi program over a 25 year period if you start with a $10,000 in ment and add regularly to it at a rate of $2,000 a year in equ monthly investments, assuming an 8% fixed rate of return. T chart is not meant to convey past or future performance of a Fidelity fund.



Fidelity's "Step-By-Step Guide to Retirement Planning" takes you through the five basic steps to planning for your future. You'll learn how to estimate your future expenses, as well as the income you'll need to meet them. Fidelity's Guide can help you pinpoint a retirement goal and select an investment strategy for building a portfolio tailored to your needs.

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2r

[1]Total returns are historical and include change in share price and reinvestment of dividends and capital gains. Past performance is no guarantee of future results. [1]Periodic ment plans do not assure a profit against a loss in declining markets. Contributions made to a Fidelity SEP-IRA or The Fidelity Retirement Plan (Keogh) through automatic inv be made only by the employer to his or her own account. [2]Effective 1/1/92 for Brokerage IRA, Brokerage Rollover IRA and Brokerage SEP-IRA accounts. Fidelity Distributors tion, Fidelity Brokerage Services, Inc. Member NYSE, SIPC, 161 Devonshire St., Boston, MA 02110.

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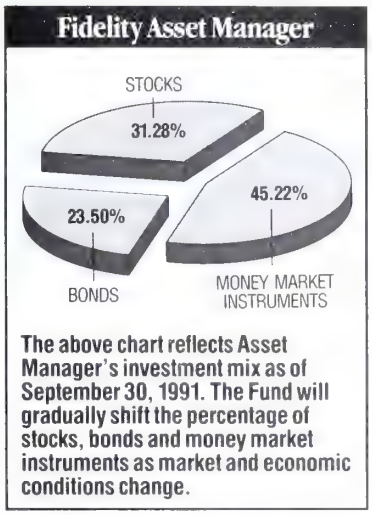

The above chart reflects Asset Manager's investment mix as of September 30, 1991. The Fund will gradually shift the percentage of stocks, bonds and money market instruments as market and economic conditions change.

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DO GOLDBUGS HAVE ROCKS IN THEIR HEADS?

GOLD IS NO LONGER A GOOD HEDGE IN TIMES OF TROUBLE

Pity the poor goldbug. Peace keeps breaking out. Inflation is low. And the price of gold, at $359 per ounce, is down almost 10% from $394 at the beginning of the year and is mired in a narrow trading range. True, analysts say the downside is now limited, and tighter supply in 1992 could move the precious metal's price up a bit. But the bottom line is clear: Gold has lost most of its traditional luster.

It was an abysmal year for other precious metals, too. Platinum was clobbered by ample supply and the deep recession in the auto industry, where it is used in catalytic converters. After starting the year at $16 above gold, or $410, it now trades below gold and is down by more than 15%. Silver prices also took a dive, from $4.20 to about $3.80.

Inflation has been the rallying cry of the goldbugs. While inflation eats away at the value of paper assets, they argue, gold retains its value. But today's nearly inflation-free economy has the goldbugs heading for the hills. Economic forecasters are saying that inflation will be tepid for years. The problem with gold is that it just sits in a safety-deposit box, says Bruce L. Kaplan of Kaplan & Co., a Los Angeles precious-metals consulting firm: "You could see value on the basis of history or beauty, but the truth is that it doesn't pay interest or dividends."

'KNEE JERK.' And what about gold's reputation as a haven in turbulent times? From gold prices, one would never have guessed that there was war in the Middle East and political turmoil in the Soviet Union in the past year. "The market showed that responsiveness to military and political events is short-lived and nothing but a knee-jerk reaction," says William B. O'Neill, senior futures strategist with Merrill Lynch & Co.

Perhaps most damaging to the case for buying gold as a hedge against political and financial upheaval is that gold has been superseded by more pinpointed hedges. "Gold was a blunt instrument in hedging," notes Frederick Demler, metals economist for PaineWebber Inc. "We've seen a fundamental shift to more focused instruments over the last decade as the market in Chicago has grown in sophistication and liquidity." Investors now hedge with futures and options on currencies and fixed-income securities. For example, instead of buying gold as a hedge against further turmoil in the Soviet Union, an investor could sell futures on the German mark. Any turmoil would probably send the mark tumbling.

FEWER RESERVES. Still, there are slight glimmers of hope for gold. Lowered estimates of the Soviet Union's gold reserves may mean less supply available to be dumped on the market. Less production may also keep prices from free-falling. Says Kaplan: "If gold goes beneath $350, some mines may just shut down, because producing gold just won't be profitable."

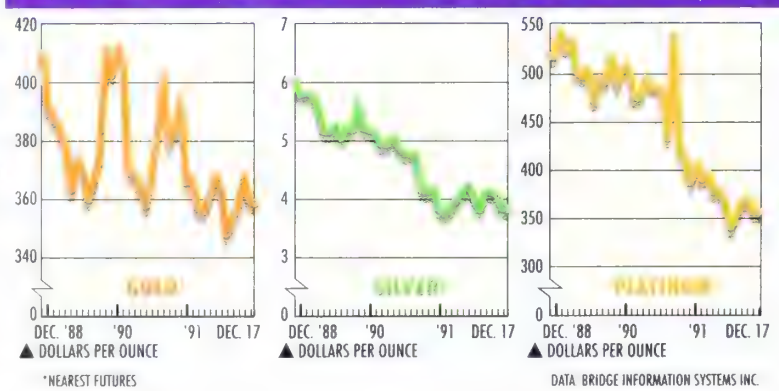
There is less hope for platinum. About 40% of demand comes from the auto industry. But with a bleak economic outlook, consumers aren't buying cars. Platinum has historically traded above gold, but "the price of platinum will stay underneath gold for a couple of years," says Jeffrey M. Christian of precious metals consultant CPM Group.

Demand for silver has held up a little better. Increased demand from the jewelry, electronics, and photographic industry would nudge prices up, but a big move isn't expected.

Most analysts already refer to silver and platinum as industrial commodities. Despite the goldbugs' protestations, gold seems headed for much the same fate.

By Suzanne Woolley/New York

THE SHINE IS OFF PRECIOUS METALS



*NEAREST FUTURES

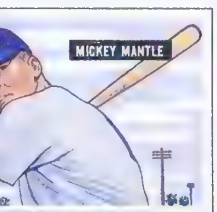
DATA: BRIDGE INFORMATION SYSTEMS INC.

SEE THOSE MOUSE EARS? THEY'RE WORTH A MINT

' AND MOVIE MEMENTOS KEEP CLIMBING THE LIST OF HOT COLLECTIBLES

ollecting during the buoyant 1980s was almost a sure thing, as les of dollar-waving hasers—including af- nt new buyers from ope and Japan—drove rices on works of art, ques, coins, *netsuke* rines, and many other s. These days, best l collecting's hoary m: Buy pieces that you onally appreciate—and ider any appreciation eir value a bonus. But he best chance to reap bonus, it's smart to fields that are hot.

the many categories ollectibles considered ntially salable—there roughly 100 from ericana" to "Weapons" lot Books' $5.95 *Where Sell It Directory*—a t handful seem sound stment possibilities. Among them: l-painted frames from Hollywood's nated cartoons and feature films; nal advertising posters for movies, ucts, and entertainers; certain old and games; and sports memorabilia.



In almost every area, the potential for appreciation is closely linked to demographics. The television generation from the '50s, '60s, and '70s now eagerly seeks mementos of its h. Anything that brings to mind the es first glimpsed on the family's TV stands a chance of being valuable. It be a poster recalling countless re- of *King Kong* and *Dracula*, an entic frame from a Mickey Mouse oon, a 25-year-old toy with the *Star* insignia, or a baseball glove or oall jersey used by a sports figure who raced across the tube.

SOLD:
$57,200
THAT'S A RECORD FOR A MOVIE POSTER

The burgeoning interest in movie posters was evident at a recent Christie's auction. With a big crowd bidding feverishly, one buyer paid $57,200 for a 1933 *King Kong*. That topped last year's record of $37,000 for *The Cabinet of Dr. Caligari*, a film prized more by cinema historians than by the TV generation.

Not all poster buyers pay prices "comparable to some in the fine-arts area," says Jack Rennert, of New York's Poster Auctions International. At one of his company's recent sales, only 10% of some 320 advertising posters from the late 1890s and early 1900s fetched five figures, and many went for $1,000 or so. "It's still an affordable field," he says.

The appeal of any collectible depends on its originality (and proof of it), rarity, and condition. Since Christie's began auctioning animation art in the mid-1980s and sold a 1934 black-and-white drawing of Donald Duck on celluloid for $286,000, some promoters have lured investors with mail or phone pitches. They invariably stress that limited numbers of old "cels" exist—because most were discarded or washed for reuse. Still, anyone who casually buys a supposedly rare painting of Minnie Mouse or Bart Simpson could end up with something of limited value, notes George Darrow, of Fun Antiques in New York City.

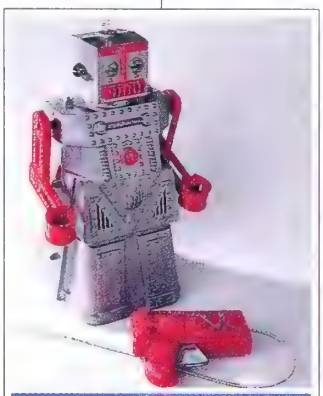
JOE'S NURSE. "The animation art prized by collectors is a scene made up of layers," Darrow points out. "Usually the outline of the figure is drawn on one side of the celluloid sheet, the color painted on the other. Another sheet has the background, another has the eyes or feet in a certain position, and so on. And if the cels were actually used for a film, there will be holes where the sheets were fitted on the animation stand." At a Christie's auction on Dec. 10, such complete cels from Walt Disney's *Bambi* and *Sleeping Beauty* sold for $15,000 and $33,000, respectively.

SOLD:
$15,000
AN ORIGINAL DRAWING ON CELLULOID FROM DISNEY'S CLASSIC CARTOON FEATURE *BAMBI*

Darrow says video's influence also shows up in the active market for old toys. Particularly sought, and worth about $1,200, is a 1950s-era doll advertised as a companion nurse to the popular G. I. Joe figure. And robots, like those in *Forbidden Planet* and *Lost in Space*, are in demand.

Prices for sports memorabilia of the relatively recent past are also climbing: $22,000 for a Mickey Mantle baseball card, for example. President Duane Garrett, of Richard Wolfers Auctions Inc., says the typical buyer at his sports auctions is "the 44-year-old who grew up in front of the television watching Mantle hit or Johnny Unitas score." Garrett sees growing demand for a limited supply of authentic items forcing a rise in prices. "In this market, it's easy to locate buyers," he says. "The hardest job is finding someone willing to sell something." Say, didn't you once have a ball autographed by Willie Mays? Better check your closet.

By Don Dunn in New York



PRICE:
$400
ROBERT THE ROBOT WENT FOR JUST A FEW DOLLARS IN 1959

(CLOCKWISE FROM TOP LEFT) PHOTOGRAPHS BY CHRISTIE'S (2) PETER TENZER; RICHARD WOLFERS AUCTIONS, INC.

The few blue whales
remaining alive in the world
are no match for the predator
who has carelessly eliminated
eight hundred species of life
from the face of the earth
in this century alone: Man.
Like every other creature in the sea,
the blue whale requires clean water to live.
The Samsung Group
has designed and is currently producing
supertankers with a double-hull,
double-bottom construction
that prevents oil spills.
The vessels, which are being built
for major oil companies
in the United States and Europe,
are proof that technology
can make man a protector
instead of a predator.

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WHY THIS LANDSCAPE SHOULD MAKE PENNY-PINCHERS BEAM

THERE ARE GOOD BUYS FOR CAREFUL SHOPPERS, AND ACTIVITY IS RISING

Credit Christie's, at the least, with a sense of humor. Planning its big evening sale of contemporary art on Nov. 12, the auction house chose a genial landscape by Ed Ruscha for the final lot. The title, writ large across the canvas: *Not a Bad World, Is It?*

Not a bad commentary on the withered art market, either. Prices, volume, and the quality of works on offer have indeed sunk from their '80s heights, thanks to the global slowdown that's making even the affluent count their pennies. But in contrast to 1991's early months, when the Persian Gulf War stopped most buying cold, activity is up. Says New York dealer André Emmerich, president of the Art Dealers Association of America: "1985 and '86 were very happy years, and we're there now." During November's bellwether New York auctions of Impressionist, Modern, and contemporary works, Sotheby's and Christie's sold $137.5 million worth of art. That's up from the $105 million taken in at comparable sales last spring, though it lags way behind the $911 million total of November, 1989.

Look beyond those key sectors, which were most inflamed by the speculative fever of the '80s and are most depressed now, and the picture brightens a little more. In such categories as Old Master paintings and antiquities, prices have generally held firm or risen.

Overall, though, the art market has shrunk, and therein lies opportunity for long-term investors: Many dealers—loaded with inventory and needing cash—are willing to bargain. Sellers who are consigning works to the auctioneers are taking lower prices, too, or seeing their possessions languish on the block.

BIG DROP. Investors have a choice of how to play a market like this: conservatively, hewing to the slow, steady categories, or boldly, testing potential new trends in, say, international contemporary art. Either way, buyers should remember that investing in art isn't like purchasing stocks, bonds, or even real estate. Since tastes change, works by an artist sought after in one period may fall completely out of favor in another. And lack of liquidity, always a potential problem, worsens in downturns—especially for works that are less than top-notch. "Selectivity" is the art world's biggest byword these days. Says private dealer Stephen Mazoh: "The number of buyers for run-of-the-mill works has dropped off dramatically." So you're best off buying only what you wouldn't mind keeping and leaving to your heirs.

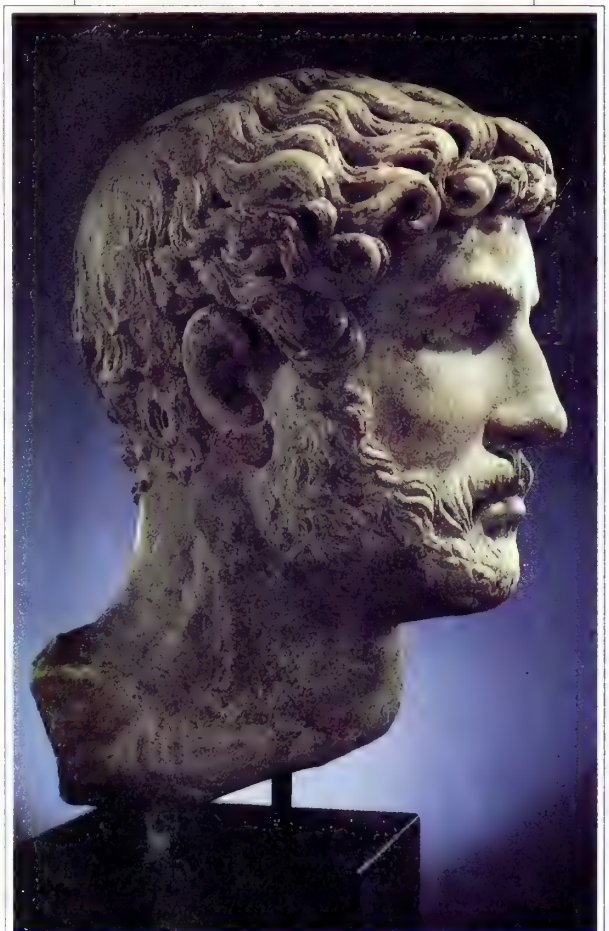
That said, 1992 presents several buying opportunities—even, with a few caveats, for Impressionist, Modern, and contemporary art. There, prices are at '87 levels, and some experts belie they'll fall further in 1992. And it m even be a plus that many speculato have fled the market: "It's a much mo predictable situation than it was in t '80s," says art adviser Jeffrey Deit "The market will be more rational."

But buyers should take extra ca with French Impressionist pai ings, especially the "pretty" s ond- and third-tier works th were bid up to fantastic lev over the past half-decade by Japanese. Many of those buy are experiencing financial diffic ties; some may now be forced sell off their huge art trov driving down prices.

To make matters worse, si last spring Japanese authorit have been investigating the proper use of art to dodge tax descending unannounced on g leries to scour their books. Ma Japanese, fearing bad public have stopped buying. Says Hid Kobayashi, president of the w known Kobayashi Gallery: "T atmosphere is pretty bad ri now in Ginza," home to most Japan's big dealers.

So investors who want to p it safe may be better off in ot art sectors. Prices of Old Mast are ascending fairly steadily, aren't necessarily expensive. can find a Rembrandt drawi for example, for less than $1,0

HEAVY TRAFFIC. The outlook American paintings—includ such artists as Winslow Ho and Stuart Davis—may be s start to improve. Prices are off some 25% from the heights 1988-89. New York dealer War Adelson, for example, rece sold a Maurice B. Prendergast paint for $550,000; in 1989, he would h priced the same work at $750,000. A son is offering another Prendergas *Holiday, the Picnic*—at $275,000, and says such lower prices are drawing buyers. "There seems to be a sense floor, a level at which people are talk and buying," Adelson says. "The tra is definitely there."



A BUST OF HADRIAN IS PRICED AT $1 MILLION

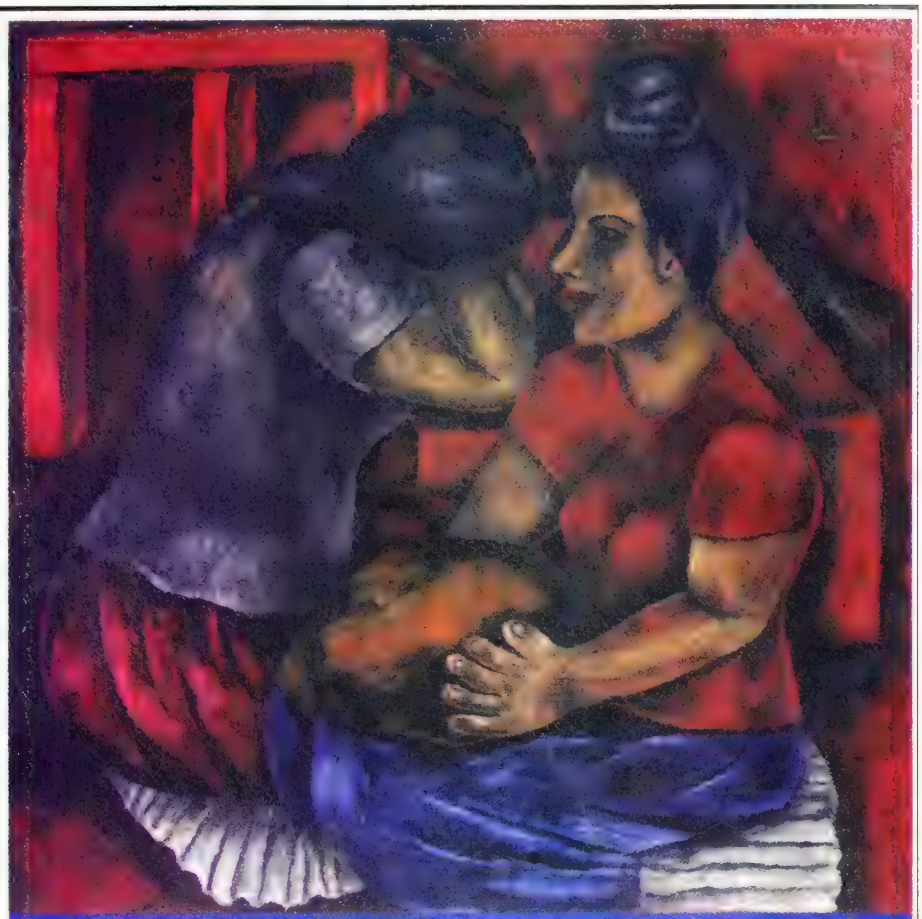
ntiquities, too, may be ripe. They've
n steady buying, with prices rising
derately. Lately, activity has quieted
'n a bit, and buyers can bargain for
es that are underpriced compared
n art sectors inflated by speculative
ney. Quality Greek and Roman pieces
be had for $10,000 or less. Or buyers
go much higher—Emmerich has a
ctacular marble head of the Emperor
drian priced at $1 million.

What about the bold—where should
y turn? Some experts suggest get-
in on the globalization of the con-
porary art world. More Latin Ameri-
s, Koreans, and Taiwanese are
ing art these days, and collectors
n all over the world are purchasing
work from outside their home mar-
s. "The '90s will be a period of inter-
onalization," predicts Patrick Cooney
Citibank's Art Advisory Service.

he hottest area seems to be Latin
erican art. In November, Christie's
Sotheby's took in a total of $21.7
ion for their Latin art sales, vs. $19.8
ion a year ago. Although many lots
not sell, nearly 20 artists set new
ords. At Christie's, a stunning por-
t of a flower vendor by Diego Rivera
t for $2.97 million—an auction re-
d for any Latin American artist—
ting the mark set just the night
ore at Sotheby's, where José Maria
asco's *Valle de Mexico* fetched $2.4
ion.

Most of the buyers came from South
erica, where humming economies are
ating a new class of *arrivistes* eager
buy art. But the bidding on many
ks was international—from the U. S.,
rope, even Japan. "Latin American
has found recognition here once and
all," declares Clara Diament Sujo,
ector of CDS Gallery in New York and
rger gallery in Venezuela.

ut not so much recognition that the
in American market has crested.
s at a nice point—there's still plenty



IZQUIERDO'S *TWO WOMEN WITH PAPAYA* IS OFFERED AT $85,000

of works available for $2,000 to $20,000, but there are starting to be superb examples going for above $1 million. That's validating" to an emerging market, says Mary-Anne Martin, a New York dealer who once headed Sotheby's Latin American department.

UP-AND-COMERS. The key to buying is ferreting out artists who are gaining international reputations. Among those already well-known outside their own country are Rivera, Rufino Tamayo, and Frida Kahlo. Beyond them, look for artists represented by galleries in the U. S. and Europe and exhibited by museums.

Martin cites Mexican Olga Costa, one of whose paintings just sold at Christie's for $60,500, vs. a presale estimate of $10,000 to $12,000. And she notes that Mexico's Maria Izquierdo is being called the next Kahlo by some. One Izquierdo sold privately for $220,000 last fall. Martin is offering her *Two Tehuana Women with Papaya* for $85,000. Sujo adds Jacobo Borges, a Venezuelan whose oils range from $10,000 to $80,000, and Germán Gargano, an Argentine whose paintings sell for less than $10,000, to the up-and-comers' list.

Internationalism is evident elsewhere, too. There was plenty of American bidding on some prime German paintings at the November auctions. And Japanese contemporary artists are experiencing new support from both Japanese buyers and some Americans. Deitch, for example, calls Tatsuo Miyajima, whose paintings start around $20,000, a "really great international artist." Adds Deitch: "People are looking everywhere to find the most interesting material."

As always with art, getting a return could take a while—but the art world's bulls are sure the outlook is healthy. "The base of collectors is so much bigger than it was 10 years ago," notes Deitch. Sanford L. Smith, who has been operating art fairs for 26 years, is more venturesome: "I think you'll see an explosion in the art market in the spring of '93. There's a lot of pent-up desire to buy things, and when confidence builds after the Presidential election, it'll explode." Perhaps. But art investors should never count on a turnaround as quick as that.

By Judith H. Dobrzynski in New York

PRENDERGAST'S *HOLIDAY* IS FOR SALE AT $275,000

(TOP TO BOTTOM) MARY ANNE MARTIN/FINE ART; ADELSON GALLERIES, INC.

▲ Commodities trader Stig Ostgaard shuns the pits in favor of his Chicago-area home

▶ Frozen orange juice futures soared in September after reports of a small harvest in Florida

▶ Argentina's tiny stock market jumped by 315% in 1991 in the midst of a privatization drive

OIL TANKS, BROKERAGE FIRMS, AND FROZEN ORANGE JUICE

THE BIGGEST MONEYMAKERS OF 1991 (ALONG WITH A FEW LOSERS)

Will Rogers once described how easy it is to make money in the stock market: You buy a stock, and it goes up. And if it doesn't go up? You don't buy it. Well, 1991 proved that Will Rogers was right.

To make money in 1991, just about all you had to do was to buy a stock, and it went up. To be sure, it was possible to lose money in the stock market. Lots of people managed it—by, say, getting too carried away, early in the year, with the potential for a war-related oil shock (remember that?), which all too briefly levitated oil stocks.

But for those who bought most stocks, it was easier to be a winner than a loser in 1991, as this annual list of saints and sinners shows:

STOCKS

BEST NYSE STOCK: *WMS Industries.* Shareholders of this Chicago-based casino operator and pinball powerhouse have counted themselves lucky. WMS shares have gained 607% so far in 1991, making it the best-performing stock of any Big Board company that began the year trading at $1 or above.

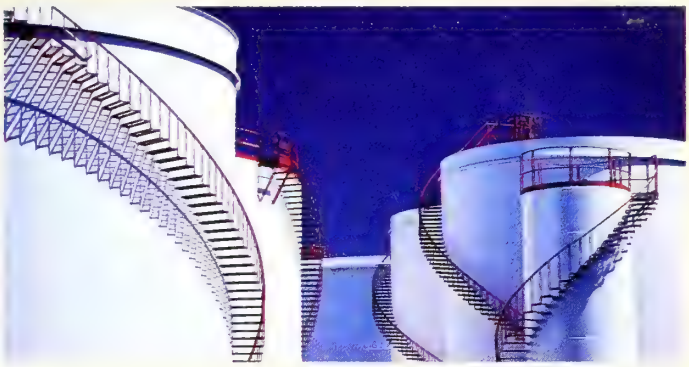
For WMS, which makes coin-operated amusement machines under the Midway trade name, among others, 1991 was a rebound year. The company recorded a loss per share of $1.24 in the fiscal year ended June 30, 1990, partly because of a onetime loss on an unprofitable investment. But the year that followed was a winner, and analysts expect the coming fiscal year to come up aces—$1.45 a share, according to a survey of analysts by Zacks Investment Research.

WORST NYSE STOCK: *Koger Properties.* In real estate's halcyon days in the 1980s, Koger was serene. The Florida company was a leading developer of suburban office complexes in the once hot Sunbelt states. But when the real estate boom turned to bust, Koger collapsed with it. The company's shares have fallen 95% since the beginning of the year, from $4.25 to 22¢, making it the most crushing loser of any Big Board stock.

With cash flow ebbing, the company failed to pay interest on some of its debt during the summer. The company sought protection on Sept. 25 from creditors under a Chapter 11 bankruptcy.

BEST AMEX STOCK: *Astrotech International.* Despite a downturn in the oil patch, 1991 has been a gala year for this oil-services company in Pittsburgh. Like Big Board leader WMS, Astrotech is on the rebound. After three straight years of losses, the company has soared into the black. Its stock has risen 670% so far in 1991, the best performance of any American Stock Exchange share that began the year at $1 or more.

Astrotech shares predictably climbed during Operation Desert Storm but have since held their gains. Astrotech maintains and modifies large above-ground



▲ Pittsburgh oil-services company Astrotech held on to gains made during the gulf war

▶ Mutual fund manager Kenneth Oberman's formula is simple: Biotech stocks only

torage tanks, often to comply with ronmental regulations—a business doesn't depend on high oil prices.

RST AMEX STOCK: *Transcisco Indus-s.* Of all the Amex stocks that began year at $1 or more, none has suf-d more than this San Francisco in-rial-service company. Transcisco's s A shares declined from $2.88 at beginning 1991 to 13¢—a decline of in market capitalization.
ranscisco is a major player in its par-ar niche of Corporate America—the ufacture and maintenance of rail- equipment. Alas, the slow economy the failure of one of its clients were avy blow. In July, the company filed Chapter 11.

T OTC STOCK: *Immune Response p.* was the over-the-counter pick of biotechnology boom. This Carlsbad if.) company specializes in products ed at treating people with the virus leads to AIDS and other ailments. company's shares began the year at 8 and zoomed almost twentyfold into ember on the strength of its AIDS arch. But on Nov. 12, when regula- dashed the company's hopes for k approval of a vaccine, Immune Re-ıse's shares plummeted 20%.
ut even with the sell-off, Immune ponse shares registered a 1,219% , ending up at more than 13 times the starting price—the biggest increase of any OTC stock in 1991.

WORST OTC STOCK: *Colorocs Corp.* If you were looking for a corporate poster child for National Recession Week, it would be this Norcross (Ga.) developer of color printers and copiers. As a result of mounting cash-flow woes as it tried to introduce a new color copier, the company filed for Chapter 11 in October and, since the end of 1990, has seen its shares drop from $2.88 to 3¢. That's a 99% decline, the worst of any OTC stock.

Will Colorocs survive? Well, the company is trying. It has sliced payroll to the bone, and management has brought in a team of turnaround experts to get the company back on its feet.

BEST STOCK GROUP: *Brokerage firms.* Major publicly traded brokerages have seen their shares more than double—a gain of 109%—on the strength of a resplendent stock market. And there's no doubt that all indicators are healthy. Trading volume and underwritings are way up, and costs have been cut.

But don't expect the brokerage carnival to continue, unless the stock market can pull off another major surge. Brokerage stocks are always at the mercy of the market, overperforming bull markets and underperforming bear markets. "If the market doesn't do anything or declines, brokerage stocks could be down 10% to 20%," says First of Michigan Corp. analyst Perrin Long.

WORST STOCK GROUP: *Oil and gas drilling.* The year started off promisingly for the oil industry, particularly companies engaged in exploration. The Iraqi invasion of Kuwait seemed to breathe new life into such corporations as Rowan Cos. and Helmerich & Payne Inc. But declining prices and weak demand proved the group's undoing. Shares of oil drillers declined 39% during 1991, the worst stock group performance.

Drillers will continue to suffer so long as prices are depressed. But a shakeout among weaker companies, by removing excess rig capacity, could cause a rebound among survivors—if energy prices should rebound.

PEOPLE

BEST EQUITY FUND MANAGER: *Kenneth J. Oberman.* Biotechnology stocks were one of the driving forces behind the market's surge in 1991. And of the mutual funds that were lucky enough to specialize in biotech, none proved more adept than Oppenheimer Global Bio-Tech Fund, which rose 104.6%. The Oppenheimer fund had a simple formula for success: biotech only. "The advantage we had over other people was in being completely exposed to the area," Oberman points out. The fund's two largest hold-

[TOP TO BOTTOM-RIGHT] PHOTOGRAPHS BY STEVE KONGARD/THE IMAGE BANK; JOHN S. ABBOTT

The Immune Response Corporation

▲ Despite a 20% plunge in November, biotech star Immune Response gained 1,219% last year

◀ The market was hot, and so were the traders: Major brokerage firms' shares rose 109%

ings were Amgen and Immune Response, two of biotech's biggest gainers.

But investors who would like to bet Oberman can keep it up are out of luck. The fund is closed to new investors because, he says, there just aren't many cheap biotech stocks around, and thus he doesn't need new cash.

BEST BOND FUND MANAGER: *Peter Avelar.* With a gain of 67.1% through Nov. 30, the Dean Witter High-Yield Securities fund is easily the best-performing fixed-income fund of 1991. And much of the credit must go to Avelar, who took over the fund in December, 1990.

But it might be a tad early to uncork the champagne. John Reckenthaler, editor of *Morningstar Mutual Funds,* notes that the Dean Witter fund lost 40% in 1990 because it was burdened with the lowest-quality junk issues. It was precisely those issues that bounced back most strongly in 1991. "It's possible that if I had run the fund, it might have been the best performer," says Reckenthaler. Avelar won't comment—in adherence to corporate policy, a spokesman says.

BEST COMMODITY FUND MANAGER: *Stig Ostgaard.* Commodities pits conjure up images of arms flying and voices screeching. But the best commodity-fund manager of 1991 eschews such hubbub. As head trader and principal of Sjo Inc. (pronounced "show"), Ostgaard works at home in suburban Chicago, following the markets on a computer screen. "The office environment can tend to be distracting," Ostgaard explains. His firm, which specializes in trading futures on foreign financial instruments, saw its portfolios gain 67% through the end of October.

Ostgaard steered clear of investments that might have been affected by the gulf war and the failed Soviet coup, thus saving himself the whiplash that hurt many fund managers this year. Instead, he concentrated on Eurodollars and Australian government debt. He uses computer charts but avoids the strict trend-following strategy that has become *de rigueur* among fund managers. "A lot of time, traders follow the same signals," he says. "They all tend to move into the markets at the same time."

MARKETS

BEST OVERSEAS MARKET: *Argentina.* Ever since President Carlos Saúl Menem took over in 1989, Argentina has been on a roll. Elected on a pledge to get the country's debt-hobbled economy going after decades of decay, Menem has stabilized the currency, reduced inflation, and launched a privatization drive to get the government out of everything from telephones to toll roads.

As a result, the Buenos Aires *bolsa* is on fire. In 1991, the tiny market beat the world's bourses hands down, jumpi 315%—in dollar terms, no less—aft dropping by 38% in 1990. Many pros s the market cooling off in 1992 but or by a little. Projected gross-national-pr uct growth of 5% and more privati tions should keep traders hopping.

BEST COMMODITY: *Frozen concentr ed orange juice.* At breakfast, take good hard look at that glass of oran juice. If there's a golden hue, it's prol bly just residue from the commod pits, where O. J. was the golden futu contract of 1991.

O. J. traded within a narrow range most of 1991. But in September, sus cions grew that the Florida crop wo be less than anticipated. When repo indicated that Valencia oranges wo have a smaller-than-expected harve O. J. prices soared. The recent futu contract of frozen concentrate h climbed 60% since yearend 1990.

Some experts advise retail investors skip the O. J. market altogether. " constantly try to dissuade people fr trading orange juice," says Sandra Ka a Shearson Lehman Brothers Inc. a lyst. "Most people who come to the m ket from outside the industry lose m ey." When you're trading orange ju as in other commodities, it's import not to get squeezed.

By Gary Weiss in New York, with Da Greising in Chicago

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WALL STREET'S STAR SEARCH 1992

HAT YOU NEED TO KNOW ABOUT 900 COMPANIES AND THEIR EARNINGS

lirst there was a recession. Then came a sputtering recovery. Any way you slice it, after the market's l burst at the beginning of the year, s have been tough for investors. it doesn't look as if things are going et much easier in 1992 as the recov- continues to dawdle. So before you up a list of your favorite stocks for it may be worthwhile to do some ework. To help you, BUSINESS WEEK again compiled its annual Invest- Outlook Scoreboard.

On the following pages, you will find a treasure trove of financial intelligence assembled by Standard & Poor's Compustat Services Inc. on 900 publicly traded companies. Conveniently divided into 24 industry groups, the Scoreboard provides pertinent historical data and investment ratios, such as dividend yield and price-earnings multiples, that should make stock evaluations easier. What's more, IBES Inc., a unit of Citicorp that tracks the opinions of securities analysts, provides earnings estimates for each of the companies listed. The forecasts are based on a survey of 2,500 analysts across the country.

Which industry groups will perform best and worst next year? According to the IBES data, analysts believe that forest-products companies—those that make paper and lumber for buildings—may show the biggest earnings-improvement. They were the worst performers in 1991. The biggest disappointment, according to the survey of analysts, could come among electric utilities. The consensus estimate for 1992 is a modest 6% profit rise, vs. a 30% increase in 1991.

NEAT TRICK. Such industry forecasts, of course, are only the first step in finding attractive companies. Savvy investors use an array of methods to isolate the stocks they want to buy. So BUSINESS WEEK has sifted through a mountain of statistics to isolate stocks that satisfy the requirements of six popular investment strategies (page 168).

Earnings are perhaps the most fundamental measure that investors want to know about. After all, a company's stock price has traditionally been fueled by a healthy bottom line. One of the biggest profit increases is forecast for Scientific-Atlanta. The Atlanta-based TV-equipment vendor announced in early December that it was joining forces with Zenith Electronics Corp. and American Telephone & Telegraph Co. to develop high-definition TV technology.

Another time-honored method of locating promising stocks is to find those that are selling way below book value, which is the difference between assets and liabilities divided by the number of shares outstanding. The trick, however, is to separate stocks that are overlooked from those that are avoided for good reason.

The list for 1992 is dominated by troubled thrifts and banks. But it also includes some promising companies, such as Perini Corp., a construction and real estate-development company. The Framingham (Mass.) company also turns up on the list of potential big earners. Perini has recently signed contracts for a number of big building projects.

High-yield stocks should do well in 1992, especially with interest rates way

WHAT THE ANALYSTS EXPECT: INDUSTRY GROUP WINNERS AND LOSERS

1991

HE STRONGEST	Earnings change from 1990
UCKING & SHIPPING	171%
NKS–EAST	142
MICONDUCTORS	114
ROSPACE	61
RE & RUBBER	36
ALTH CARE SERVICES	35
EDICAL PRODUCTS	30
ECTRIC UTILITIES	30
TING PLACES	28
ANSPORTATION SERVICES	28

HE WEAKEST	
REST PRODUCTS	–91%
ACHINE & HAND TOOLS	–69
LECOMMUNICATION SERVICES	–57
AL	–41
UMINUM	–40
ILDING MATERIALS	–40
STRUMENTS	–37
NFERROUS METALS	–34
BACCO	–32
MPUTERS	–31

1992

THE STRONGEST	Earnings change from 1991
FOREST PRODUCTS	782%
SEMICONDUCTORS	279
MACHINE & HAND TOOLS	217
INSTRUMENTS	113
COMPUTERS	106
MISCELLANEOUS LEISURE	98
BANKS–EAST	91
COAL	83
TELECOMMUNICATION SERVICES	79
TEXTILES	76

THE WEAKEST	
ELECTRIC UTILITIES	6%
TELEPHONE COMPANIES	8
NONFERROUS METALS	10
FINANCIAL SERVICES	12
FOOD DISTRIBUTION	12
INSURANCE	12
EATING PLACES	14
GLASS CONTAINERS	15
HEALTH CARE SERVICES	15
BEVERAGES	16

ecause of actual or estimated net losses in 1990, 1991, or 1992, earnings gains or losses cannot be mean- gfully calculated on a percentage basis for airlines, auto part manufacturers, car and truck makers, hotels, per manufacturers, savings and loan companies, steelmakers, textile manufacturers, and Western and outhwestern banks.

DATA: INSTITUTIONAL BROKERS ESTIMATE SYSTEM, STANDARD & POOR'S COMPUSTAT SERVICES INC.

down. Analysts expect that Asset Investors, a real estate investment trust that earns income from mortgage-related assets, will offer the highest yield in 1992. Still, investors should exercise caution when scouting out such stocks. The yield, which measures dividend as a percent of stock price, can be deceptively high if a company's share price falls dramatically. For example, the stock price of Westinghouse Electric Corp. has tumbled by about 30% since it reported it had a third-quarter loss of $1.48 billion.

Finally, investors will find it worthwhile to scan stocks that institutions rarely own. Big investors, such as pension funds, tend to limit their stock-picking to well-known companies. They often ignore smaller companies that have good prospects. High on the list is WLR Foods in Hinton, Va., which processes chickens and turkeys. Institutions own only 3% of its 10.5 million shares outstandin

To be sure, a lot can happen to t prospects for individual companies ov the next four quarters, and investo should keep abreast of developmen Still, the Scoreboard is a good starti point for tackling what BUSINESS WE hopes will turn out to be a rewardi 1992 for stocks.

By John Meehan and Robert Mims, w Fred F. Jespersen, in New York

A MENU OF INVESTMENT OPPORTUNITIES

HIGH HOPES FOR EARNINGS PER SHARE

Looking at the bottom line? These companies' earnings are forecast to move smartly in 1992

	Percent change 1991-92
SCIENTIFIC-ATLANTA	980%
ORYX ENERGY	886
NATIONAL SEMICONDUCTOR	678
ALASKA AIR GROUP	629
SMITH (A. O.)	451
BRUNSWICK	416
HARRIS	386
DANA	375
PERINI	368
ANALOG DEVICES	335
AMDAHL	303
GEORGIA–PACIFIC	302

STOCKS SELLING WAY BELOW BOOK VALUE

Bargain hunters take note. The stock price of these companies as a percentage of book is at the bottom

	Percent
CALFED	5%
FIRST CITY BANCORP. OF TEXAS	6
GM HUGHES ELECTRONICS	13
GLENFED	16
ESCO ELECTRONICS	16
DIME SAVINGS BANK	20
MIDLANTIC	25
AVONDALE INDUSTRIES	25
PERINI	29
COAST SAVINGS FINANCIAL	29
MNC FINANCIAL	31
WEIRTON STEEL	31

COMPANIES WITH THE HIGHEST YIELD

If the goal is income, these companies pay among the highest annual dividends as a percent of stock price

	Percent
ASSET INVESTORS	18.2%
CONTINENTAL CORP.	10.3
WESTINGHOUSE ELECTRIC	8.9
BROOKE GROUP	8.6
FIRST CHICAGO	8.6
CENTERIOR ENERGY	8.5
TRAVELERS	8.4
LYONDELL PETROCHEMICAL	8.4
HARTMARX	8.3
CHASE MANHATTAN	8.0
CHEMED	7.8
UNION BANK	7.8

STOCKS THE INSTITUTIONS RARELY HOLD

Unpopular—or just overlooked? Either way, if the institutions suddenly take notice, prices could rise

	Percent of shares held by institutions	Number of institutions holding
KAISER ALUMINUM	2%	8
WLR FOODS	3	14
GAYLORD CONTAINER	4	13
INGLES MARKETS	4	17
FIGGIE INTERNATIONAL	4	21
TURNER BROADCASTING	4	43
AMERICA WEST AIRLINES	5	23
MASCO INDUSTRIES	5	41
CONTINENTAL AIRLINES HOLDING	6	32
FOOD LION	6	96
ICH	7	36
PACIFIC TELECOM	7	43
AVERAGE OF 900 COMPANIES	51%	238

THE LOWEST PRICE-EARNINGS RATIOS

Prices of these stocks compared to 1992 forecast earnings-per-share suggest unrecognized values. Negative EPS estimates excluded

	Ratio
GLENFED	2.4
CALFED	3.1
COAST SAVINGS FINANCIAL	3.3
ICH	3.4
LONE STAR TECHNOLOGIES	4.0
UNION BANK	4.2
ALLIANT TECHSYSTEMS	4.7
CHASE MANHATTAN	4.9
MAGMA COPPER	5.0
NORTHROP	5.1
EQUITABLE OF IOWA	5.1
NWNL	5.1

FORECASTERS AGREE LEAST ABOUT THESE COMPANIES

Uncertainty could spell opportunity. The 1992 earnings-per-share estimates range all over the lot for these stocks. Example: Estimates for Delta Air Lines range from a profit of $2.96 to a loss of $2.46

	Consensus for 1992 Cents per share	Variation in forecasts
DELTA AIR LINES	25	1,084%
CONTINENTAL CORP.	11	818
MAXUS ENERGY	3	800
SOUTHDOWN	7	486
WANG LABORATORIES	7	386
SEAGATE TECHNOLOGY	16	381
DIME SAVINGS BANK	9	344
UNISYS	30	273
INLAND STEEL	49	245
NAVISTAR	10	180
QUANTUM CHEMICAL	78	178
ZENITH ELECTRONICS	50	178

DATA: AS OF NOV. 29, INSTITUTIONAL BROKERS ESTIMATE SYSTEM, STANDARD & POOR'S COMPUSTAT SERVICES INC.

INVESTMENT OUTLOOK SCOREBOARD

1992

OSSARY

Number of the month in which company's l year ends.

k value per share: Sum of common k at nominal balance-sheet value, capital lus, and retained earnings as shown in pany accounts, divided by number of es outstanding.

ratio: Nov. 29 stock price divided by nated 1991 earnings.

dend rate: Indicated annual payment based on latest quarterly dividend plus recurring extra or special yearend lends.

d: Indicated annual dividend as a ent of Nov. 29 stock price.

Shares outstanding: Millions of common shares outstanding as of company's latest available financial report, excluding treasury shares.

Market value: Percentage change in total market value of the company's most widely held common stock issue since Jan. 1, 1991.

Institutional holdings: Percentage of outstanding common shares held by banks, insurance and investment companies, colleges, and pension funds, and the number of such institutions.

Turnover: Percentage of outstanding shares changing hands in 1991.

Earnings per share: Primary earnings per share—net income (including proceeds from certain convertible securities, warrants, and options that are common-stock equivalents, but excluding extraordinary profit or loss items) divided by number of common and common-equivalent shares.

Earnings per share estimates: Analysts' consensus estimates for 1991 and 1992 compiled by Institutional Brokers Estimate System. Trend estimate, based on pattern of past five years, compiled by Standard & Poor's Compustat Services.

Variation: The percentage by which two-thirds of the 1992 earnings estimates are above or below the average estimate. The lower this figure is, the more analysts agree on their estimates.

											EARNINGS PER SHARE				
													1992 ESTIMATES		
		RECENT	BOOK	P-E	1991			1991 MARKET	INSTITUTIONAL HOLDINGS		1991			FROM ANALYSTS	
MPANY	FY	SHARE PRICE	VALUE PER SHARE	RATIO 1991 EST.	DIVI-DEND RATE	YIELD %	SHRS. OUT. MILS.	VALUE CHANGE %	%	NUMBER	TURN-OVER %	1990 ACTUAL	ANALYST EST.	BASED ON 5-YEAR TREND	CON-SENSUS	VARIA-TION %
L-INDUSTRY ERAGE		**41**	**24**	**23**	**0.84**	**2.58**	**84.1**	**30**	**51**	**238**	**73.3**	**2.16**	**2.11**	**3.50**	**2.89**	**17.2**
EROSPACE																
USTRY AVERAGE		**36**	**36**	**11**	**1.04**	**3.21**	**65.6**	**26**	**54**	**243**	**74.6**	**2.34**	**3.76**	**5.06**	**4.53**	**8.7**
eing	12	44	23	10	1.00	2.26	343.1	−3	46	819	85.6	4.01	4.53	5.03	4.94	4.7
nCorp	11	10	6	13	0.60	5.93	31.7	65	48	71	59.2	1.60	0.79	0.70	1.07	10.3
neral Dynamics	12	49	44	8	1.00	2.05	41.9	94	52	199	92.4	−15.34	6.07	5.11	6.64	6.2
umman	12	18	28	6	1.00	5.71	33.3	−10	33	146	42.2	2.48	2.80	3.06	2.63	8.0
kheed	12	44	39	9	2.00	4.57	63.3	30	62	265	100.1	5.30	4.79	1.62	5.61	3.6
rtin Marietta	12	54	36	8	1.50	2.77	49.8	25	65	349	72.8	6.52	7.07	8.52	7.56	1.9
Donnell Douglas	12	70	96	9	1.40	1.99	38.4	81	40	177	130.8	7.18	7.78	7.89	8.95	11.7
rthrop	12	21	24	6	1.20	5.68	47.1	22	44	178	67.4	4.48	3.70	6.22	4.13	11.1
hr Industries	07	21	25	12	0.00	0.00	17.5	26	60	91	100.3	0.00	1.74*	1.57	2.34	5.1
qua	12	41	73	23	0.60	1.46	9.5	−28	37	67	19.7	3.03	1.76	2.43	4.28	29.9
ndstrand	12	31	18	11	1.10	3.56	36.0	6	73	160	50.6	3.15	2.74	4.44	3.25	8.9
okol	06	18	17	7	0.36	2.00	19.6	28	66	111	76.5	2.15	2.75*	NA	2.85	1.8
ited Technologies	12	48	43	20	1.80	3.78	121.6	0	69	531	71.8	5.91	2.37	14.07	4.60	9.3
UTOMOTIVE																
USTRY AVERAGE		**30**	**21**	**30**	**0.77**	**3.11**	**102.6**	**32**	**45**	**194**	**48.4**	**0.46**	**−0.23**	**1.84**	**2.00**	**36.3**
RS & TRUCKS																
OUP AVERAGE		**23**	**29**	**NM**	**0.96**	**3.84**	**326.9**	**10**	**44**	**400**	**54.8**	**−0.05**	**−2.55**	**1.93**	**1.21**	**95.6**
rysler	12	12	24	NM	0.60	5.16	252.0	3	47	236	69.3	0.30	−3.22	NA	0.60	61.7
rd Motor	12	24	43	NM	1.60	6.67	480.8	−8	51	595	51.9	1.86	−4.13	NA	1.12	101.8
neral Motors	12	31	45	NM	1.60	5.20	618.0	−9	37	790	51.8	−4.09	−5.69	NA	1.18	117.0
vistar International	10	3	2	NM	0.00	0.00	250.1	22	44	197	43.2	−0.16	−0.77*	NA	0.10	180.0
ccar	12	46	30	43	1.00	2.16	33.8	43	42	182	57.6	1.83	1.07	1.93	3.03	17.8
RTS & EQUIPMENT																
OUP AVERAGE		**23**	**18**	**29**	**0.73**	**3.37**	**25.2**	**23**	**42**	**102**	**38.3**	**0.25**	**−0.05**	**1.12**	**1.84**	**18.0**
vin Industries	12	20	20	23	0.68	3.36	18.9	19	60	87	55.5	1.35	0.87	0.61	1.65	12.1
mmins Engine	12	47	34	NM	0.20	0.42	14.9	27	49	126	82.3	−14.47	−5.09	NA	2.32	28.0
na	12	25	24	69	1.60	6.40	41.1	−16	63	207	34.3	1.85	0.36	0.73	1.71	26.3
on	12	57	33	23	2.20	3.89	34.1	14	58	266	47.3	4.77	2.51	3.90	4.56	11.8
lin	08	10	12	14	0.70	6.91	55.8	−10	75	213	52.0	0.85	0.75*	0.71	0.84	9.5
deral-Mogul	12	15	9	51	0.92	6.24	22.3	9	51	69	33.9	0.20	0.29	0.37	0.97	20.6
sco Industries	12	5	5	22	0.00	0.00	59.5	3	5	41	14.8	−0.33	0.22	0.30	0.36	30.6
dine Mfg.	03	29	14	16	0.76	2.67	14.7	49	35	48	24.7	2.04	1.75	2.06	2.06	5.3
ith (A. O.)	12	17	35	35	0.80	4.71	7.9	6	12	29	8.0	3.40	0.49	0.87	2.70	27.8
ndard Motor Products	12	9	12	12	0.32	3.46	13.1	21	36	45	22.6	0.59	0.75	0.55	0.97	3.1
ndard Products	06	25	10	NM	0.48	1.96	10.2	96	47	54	24.0	1.16	−2.06*	NA	1.52	28.9
ex	12	14	9	NM	0.06	0.42	9.9	53	18	38	60.3	1.57	−1.47	NA	2.45	11.4

otes: *Actual, not estimated data. NA = not available. NM = not meaningful. (a) Shares outstanding as of fiscal yearend. (b) Actual and estimated EPS figures are fully diluted. (c) nd rate excludes a nonrecurring extra or special yearend dividend. (d) Company pays a recurring stock dividend. Data compiled by Standard & Poor's Compustat Services Inc. from ources as statistical services, newspapers, registration statements, and company reports that SPCS believes to be reliable but that are not guaranteed by either SPCS or BUSINESS WEEK orrectness or completeness. This material is not an offer to buy or sell any security. Additional data: Institutional Brokers Estimate System, Vickers Stock Research Corp.

INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS. OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
(c) **TIRE & RUBBER**																
GROUP AVERAGE		**68**	**21**	**26**	**0.59**	**0.83**	**38.0**	**107**	**59**	**222**	**77.8**	**2.15**	**2.93**	**3.96**	**3.96**	**10.4**
Bandag	12	116	20	21	1.10	0.95	13.9	38	50	183	24.5	5.50	5.66	7.13	6.34	2.7
Cooper Tire & Rubber	12	39	10	21	0.28	0.72	41.4	129	70	207	54.8	1.61	1.86	2.60	2.16	3.7
Goodyear Tire & Rubber	12	48	34	38	0.40	0.84	58.6	154	58	276	154.2	−0.66	1.27	2.14	3.38	24.9
3 **BANKS**																
INDUSTRY AVERAGE		**30**	**26**	**18**	**1.21**	**3.89**	**81.9**	**48**	**49**	**227**	**76.6**	**1.98**	**1.84**	**3.68**	**3.13**	**15.6**
(a) **BANKS - EAST**																
GROUP AVERAGE		**28**	**26**	**13**	**1.07**	**3.36**	**91.7**	**57**	**50**	**238**	**89.0**	**0.64**	**1.55**	**3.29**	**2.96**	**23.0**
Bank of Boston	12	12	18	NM	0.00	0.00	75.2	88	39	177	159.2	−6.21	−1.52	NA	0.86	40.7
Bank of New York	12	28	36	22	1.52	5.38	69.8	60	61	218	76.0	3.98(b)	1.29	0.94	3.77	9.0
Bankers Trust New York	12	60	35	8	2.54	4.22	82.0	41	73	398	74.4	7.80	7.63	14.52	7.90	7.6
Chase Manhattan	12	15	31	6	1.20	8.00	136.0	48	54	269	131.1	−3.31	2.72	NA	3.07	19.2
Chemical Banking	12	21	35	7	1.00	4.73	91.9	98	57	248	125.7	2.38	2.99	2.14	3.28	11.3
Citicorp	12	11	22	NM	0.00	0.00	346.0	−13	51	406	104.0	0.57	−1.49	NA	1.09	51.4
CoreStates Financial	12	42	27	10	2.00	4.75	54.5	33	59	264	126.3	2.06	4.14	3.35	4.58	3.5
First Fidelity Bancorporation	12	29	24	9	1.20	4.12	60.5	68	47	207	45.1	−0.33	3.17	2.03	3.47	6.3
Fleet/Norstar Financial Group	12	21	18	31	0.80	3.90	120.4	104	53	249	51.8	−0.75(b)	0.67	0.89	1.66	11.4
KeyCorp	12	38	27	10	1.44	3.79	47.3	83	49	173	38.3	3.47	3.83	4.02	4.41	3.2
Manufacturers Hanover	12	24	38	8	1.88	7.75	79.3	24	48	228	108.7	1.27	2.86	1.43	3.43	14.0
Mellon Bank	12	32	31	7	1.40	4.32	50.7	57	55	213	60.6	2.83	4.33	2.89	4.62	10.0
Midlantic	12	5	20	NM	0.00	0.00	38.1	0	21	55	165.7	−5.22	−12.43	NA	−1.53	49.7
MNC Financial	12	4	13	NM	0.00	0.00	87.3	32	17	82	70.1	−5.23	−1.91	NA	−1.10	108.2
Morgan (J. P.)	12	60	29	11	1.98	3.30	188.9	38	72	664	66.1	3.99	5.42	6.12	5.60	8.9
PNC Financial	12	42	29	11	2.12	5.06	96.6	96	53	326	46.0	0.73	3.75	1.76	4.25	4.3
Republic New York	12	40	29	10	0.93	2.36	52.1	21	53	140	27.0	3.63	3.93	1.41	4.28	2.
Shawmut National	12	9	14	NM	0.00	0.00	73.8	85	45	153	129.9	−1.84	−2.33	NA	0.47	74.5
State Street Boston	12	59	21	17	0.76	1.28	36.9	72	70	223	133.2	3.10(b)	3.47	3.98	3.88	6.7
UJB Financial	12	14	17	29	0.60	4.21	45.8	103	28	72	39.8	−0.17	0.49	0.61	1.25	16.8
(b) **BANKS - MIDWEST**																
GROUP AVERAGE		**34**	**25**	**11**	**1.36**	**4.33**	**61.3**	**54**	**49**	**197**	**56.5**	**3.06**	**3.08**	**3.89**	**3.67**	**6.4**
Banc One	12	44	20	14	1.16	2.61	160.2	61	51	447	39.9	2.76	3.15	3.54	3.50	2.0
Boatmen's Bancshares	12	44	35	11	2.16	4.88	37.9	52	44	196	73.5	3.90	4.10	3.75	4.43	2.7
Comerica	12	47	32	10	1.88	4.02	31.1	107	52	171	65.4	4.95(b)	4.92	5.99	5.40	4.4
Continental Bank	12	9	20	NM	0.60	6.96	53.8	5	45	97	99.5	0.95	−2.09	NA	1.70	23.5
First Bank System	12	22	14	11	0.82	3.66	78.1	74	47	156	55.8	1.53(b)	1.98	1.58	2.37	11.0
First Chicago	12	23	36	10	2.00	8.60	68.2	46	63	243	81.0	3.35	2.30	2.57	3.39	10.0
First of America Bank	12	29	25	9	1.28	4.36	36.0	39	38	129	32.0	3.18(b)	3.18	3.38	3.12	8.0
Firstar	12	42	29	10	1.44	3.43	30.4	95	39	113	31.3	4.10	4.27	5.03	4.71	2.7
Huntington Bancshares	12	19	14	10	0.80(d)	4.24	61.4	78	19	105	26.6	1.38	1.89	1.93	2.09	1.9
Manufacturers National	12	37	26	10	1.32	3.59	31.2	67	49	131	92.7	3.53(b)	3.74	5.80	4.04	7.9
National City	12	32	28	9	1.88	5.90	61.0	4	68	210	36.2	3.86(b)	3.54	4.28	3.98	6.0
NBD Bancorp	12	40	27	11	1.40	3.50	73.1	21	43	257	31.5	3.75	3.73	4.42	4.06	3.1
Northern Trust	12	47	20	14	0.84	1.79	34.4	61	64	150	54.6	3.09	3.42	4.32	3.82	2.9
Norwest	12	30	17	10	1.00	3.33	129.7	56	72	372	46.2	0.89	2.90	2.30	3.21	2.8
Society	12	45	33	9	1.84	4.07	33.0	41	42	171	81.1	4.63	5.14	5.61	5.18	7.9
(c) **BANKS - SOUTH & SOUTHEAST**																
GROUP AVERAGE		**29**	**25**	**47**	**1.24**	**4.41**	**86.4**	**55**	**46**	**241**	**61.1**	**2.37**	**2.23**	**2.51**	**3.01**	**14.4**
Barnett Banks	12	29	25	17	1.32	4.63	69.3	65	56	250	81.5	1.06	1.70	1.38	2.62	14.7
C&S/Sovran	12	29	20	288	1.56	5.43	136.9	87	37	259	73.7	1.60	0.10	0.25	2.38	29.4
Crestar Financial	12	16	23	15	0.80	4.92	32.1	21	39	83	76.7	1.87	1.12	1.37	1.94	24.7
First Union	12	26	24	11	1.12	4.29	112.0	74	48	261	55.1	2.52	2.38	2.39	3.10	7.4
NCNB	12	34	32	8	1.48	4.31	115.8	69	56	401	79.1	3.40	4.06	4.86	4.38	10.1
Signet Banking	12	16	28	13	0.80	5.12	26.9	52	26	80	66.8	1.56	1.17	1.54	1.71	24.0
SunTrust Banks	12	32	19	11	1.00	3.10	128.4	44	54	286	26.2	2.75	2.88	3.26	3.12	2.2
Wachovia	12	53	30	12	1.84	3.49	70.1	27	52	305	29.6	4.20(b)	4.41	5.07	4.83	2.1
(d) **BANKS - WEST & SOUTHWEST**																
GROUP AVERAGE		**25**	**28**	**8**	**1.22**	**3.89**	**93.2**	**4**	**52**	**244**	**102.3**	**3.07**	**−0.44**	**6.67**	**2.62**	**15.0**
BankAmerica	12	31	30	7	1.20	3.86	217.4	20	57	491	105.6	3.85	4.75	5.60	5.03	7.4
First City Bancorp. of Texas	12	1	18	NM	0.00	0.00	18.9	−80	21	39	123.0	−9.87	−12.15	NA	−8.10	NM
First Interstate Bancorp	12	27	20	NM	1.20	4.38	105.7	17	37	252	65.9	6.79	−3.90	NA	2.90	27.2
Security Pacific	12	25	28	NM	0.00	0.00	128.1	23	49	326	139.3	1.03	−2.71	NA	3.18	27.2
U. S. Bancorp	12	19	14	9	0.76	4.05	98.0	50	56	255	120.3	2.04	2.03	2.45	2.38	5.3
Union Bank	12	18	29	6	1.40	7.78	32.3	−2	81	16	8.0	4.23	3.07	3.37	4.24	7.7
Wells Fargo	12	56	59	10	4.00	7.17	51.9	−3	64	328	154.1	13.39	5.59	15.27	8.12	21.0
4 **CHEMICALS**																
INDUSTRY AVERAGE		**36**	**17**	**16**	**1.11**	**3.17**	**72.9**	**22**	**54**	**233**	**64.4**	**2.59**	**2.22**	**3.37**	**2.69**	**13.7**
Air Products & Chemicals	09	65	31	15	1.56	2.40	56.1	19	72	412	51.0	4.15	4.45*	16.87	4.68	2.4
American Cyanamid	12	54	28	14	1.50	2.78	93.6	3	61	565	73.7	1.15	3.91	2.61	4.58	3.9
Arco Chemical	12	37	17	23	2.50	6.73	95.9	5	9	112	8.1	3.21	1.60	1.28	2.61	18.0
Betz Laboratories	12	57	9	24	1.24	2.19	28.6	38	72	248	94.5	2.12	2.37	2.82	2.68	1.9

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS. OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
...pot	09	29	18	17	1.04	3.56	18.2	-24	62	101	29.4	2.73	1.69*	2.03	2.74	6.2
...kter	12	20	13	15	0.88	4.32	24.1	-3	69	116	36.4	1.74	1.38	1.61	1.67	4.8
...w Chemical	12	49	36	14	2.60	5.28	270.6	4	50	753	50.6	5.10	3.53	6.20	3.59	15.0
...Pont	12	44	25	15	1.68	3.79	671.1	21	39	789	29.2	3.40	2.91	3.76	3.59	4.2
...elhard	12	30	16	15	0.80	2.71	44.9	58	52	193	40.9	1.57	1.94	1.91	2.20	2.7
...yl	12	24	9	13	0.60	2.53	118.3	1	40	294	33.8	1.95	1.81	2.09	2.04	4.4
...ro	12	33	12	20	0.64	1.95	19.0	83	54	94	106.2	0.83	1.68	1.52	2.41	11.6
...t Mississippi	06	9	10	33	0.30	3.33	19.6	1	58	124	40.6	0.22	0.27*	0.15	0.48	6.3
...eport-McMoRan	12	42	8	24	2.50(c)	5.95	73.0	37	55	257	57.1	5.22	1.72	4.92	1.96	14.3
...ler (H. B.)	11	50	23	17	0.62	1.24	9.1	62	55	88	144.6	2.30	2.89	2.50	3.40	4.1
...orgia Gulf	12	19	-11	11	0.00	0.00	33.7	79	47	72	200.7	3.07	1.81	3.94	2.23	18.8
...odrich (B. F.)	12	37	48	35	2.20	5.95	25.4	-2	73	218	80.7	4.23	1.05	4.24	2.37	28.3
...ace (W. R.)	12	39	21	16	1.40	3.60	87.3	65	67	308	73.5	2.36	2.47	2.96	2.88	7.3
...eat Lakes Chemical	12	102	24	21	0.56	0.55	35.4	61	76	321	55.0	4.01	4.82	7.95	6.30	9.2
...nna (M. A.)	12	22	14	14	0.65	2.99	26.5	12	58	101	29.4	2.03	1.52	1.83	1.93	5.2
...rcules	12	43	39	16	2.24	5.18	47.0	29	70	262	71.9	2.04	2.76	1.78	3.37	3.9
...C Fertilizer Group	06	49	33	13	1.08	2.19	22.0	18	53	126	118.5	3.13	3.85*	NA	4.41	8.4
...spiration Resources	12	4	3	11	0.00	0.00	66.3	7	20	39	34.4	-0.38	0.34	0.62	0.57	28.1
...ernational Specialty Products	12	12	2	18	0.00	0.00	99.9	NA	12	53	NA	NA	0.66	NA	0.87	8.0
...tite	12	40	9	20	0.68	1.72	36.4	33	42	163	34.7	1.70	1.98	2.70	2.22	4.1
...rizol	12	53	22	15	1.60	3.04	34.5	11	65	290	96.6	5.34	3.46	5.03	3.91	4.1
...ndell Petrochemical	12	22	2	8	1.80	8.37	80.0	47	36	124	34.7	4.45	2.74	NA	2.25	15.1
...nsanto	12	61	31	12	2.08	3.40	126.8	28	62	641	64.3	4.23	4.97	5.98	5.84	5.0
...rton International	06	49	23	17	0.96	1.94	48.3	9	65	334	64.5	2.80	2.85*	3.06	3.06	2.9
...lco Chemical	12	33	7	19	0.84	2.52	69.6	19	64	332	55.5	1.71	1.76	2.28	2.00	4.0
...n	12	41	29	12	2.20	5.33	19.0	9	45	130	56.6	4.03	3.49	4.47	4.16	9.4
...antum Chemical	12	11	-7	NM	0.00	0.00	29.1	-12	47	134	121.7	0.79	-1.53	NA	0.78	178.2
...m & Haas	12	39	20	16	1.24	3.21	66.8	11	78	234	25.0	3.10	2.44	2.98	3.11	6.8
...ulman (A.)	08	41	12	19	0.36	0.87	19.7	33	58	138	57.0	1.79	2.15*	2.75	2.19	4.6
...rling Chemicals	09	4	2	7	0.30	6.86	55.1	-26	16	35	31.9	1.07	0.67*	0.70	0.33	27.3
...on Carbide	12	18	19	12	1.00	5.71	126.5	8	48	279	75.5	2.19	1.45	2.57	1.57	24.8
...oro	06	20	7	11	0.60	2.94	20.0	NA	26	31	NA	1.60	1.86*	NA	2.08	3.4
...llman	12	21	13	15	0.12	0.57	32.4	17	74	189	105.1	1.90	1.41	2.57	1.84	9.2
...rco	12	39	28	12	1.84	4.78	21.8	25	69	137	35.3	2.95	3.11	2.64	3.47	4.9
...NGLOMERATES																
...USTRY AVERAGE		**30**	**23**	**16**	**0.97**	**3.06**	**106.8**	**20**	**55**	**285**	**53.5**	**2.23**	**1.95**	**3.02**	**2.80**	**11.3**
...o Standard	09	33	18	17	0.92	2.77	44.4	10	53	204	40.2	2.19	1.95*	2.42	2.40	5.4
...ed-Signal	12	39	21	16	1.00	2.57	137.4	47	57	386	59.8	3.35	2.49	2.84	3.62	4.7
...l	12	44	27	14	1.40	3.21	39.5	78	52	210	53.2	2.90	3.02	3.39	3.55	11.6
...gie International	12	21	19	14	0.50	2.44	18.6	17	5	21	4.2	2.28	1.45	1.90	1.97	0.0
...qua Industries	12	13	16	NM	0.36	2.74	16.5	21	34	64	79.7	-0.06	-1.41	NA	1.14	21.9
...neral Cinema	10	18	23	21	0.52	2.97	69.8	-10	48	219	38.2	1.51	0.83	1.08	1.00	14.0
...neral Electric	12	65	24	13	2.04	3.15	866.6	12	51	1218	37.2	4.85	5.13	6.42	5.68	2.1
...usehold International	12	41	39	7	2.26	5.53	39.6	38	63	275	85.7	5.75(b)	5.63	7.10	6.43	5.4
	12	17	14	39	0.00	0.00	32.1	42	78	76	106.4	-0.82	0.43	NA	0.66	71.2
	12	52	68	9	1.72	3.32	114.4	8	67	507	48.9	8.06	6.06	8.32	6.84	6.7
...tional Intergroup	03	15	20	18	0.00	0.00	21.9	6	36	112	65.5	-3.05	0.80	NA	1.80	NM
...den	12	18	11	14	1.25	6.94	43.0	-4	49	202	55.1	1.31	1.29	1.53	1.47	4.1
...l	07	36	8	26	0.44	1.24	58.4	54	67	298	56.1	1.15	1.38*	1.49	1.64	3.0
...n Central	12	24	33	14	0.68	2.80	47.7	10	74	112	27.6	1.60	1.75	2.11	2.09	5.3
...mark International	12	34	24	12	0.84	2.44	30.7	98	64	197	69.5	1.64	2.84	2.28	3.25	4.6
...ckwell International	09	25	18	10	0.92	3.64	231.1	-11	50	320	25.9	2.56	2.57*	2.92	2.63	4.6
...edyne	12	20	8	23	0.80	3.95	55.4	37	35	177	43.1	1.25	0.87	0.73	1.66	21.7
...neco	12	33	18	NM	1.60	4.81	122.5	-30	57	504	93.3	4.37	-2.72	NA	2.99	17.7
...tron	12	37	33	11	1.00	2.71	85.8	36	62	306	42.8	3.18	3.45	3.43	3.81	3.9
...W	12	35	31	15	1.80	5.09	61.3	-4	53	320	33.2	3.39	2.32	2.73	3.23	9.3
...itman	12	12	4	16	0.24	1.96	106.8	-29	73	260	58.1	-0.68	0.76	0.66	0.95	8.4
...NSUMER PRODUCTS																
...USTRY AVERAGE		**32**	**12**	**19**	**0.75**	**2.35**	**111.0**	**49**	**51**	**250**	**67.1**	**1.96**	**1.83**	**2.44**	**2.41**	**13.8**
...PAREL																
...OUP AVERAGE		**25**	**12**	**16**	**0.44**	**1.98**	**37.2**	**55**	**57**	**170**	**92.7**	**1.38**	**1.41**	**2.27**	**2.16**	**16.1**
...own Group	01	26	19	16	1.60	6.10	17.3	19	53	152	40.1	1.85	1.66	1.54	2.38	7.6
...rystal Brands	12	14	26	17	0.20	1.44	9.1	-36	74	92	109.2	3.18	0.84	1.57	2.12	22.2
...it of the Loom	12	23	9	16	0.00	0.00	74.7	214	66	192	100.7	1.18(b)	1.41	1.87	1.79	6.1
...ano Group	12	14	12	32	0.00	0.00	15.8	10	26	45	29.6	0.54	0.44	0.24	1.69	14.2
...rtmarx	11	7	12	NM	0.60	8.28	25.1	4	62	126	57.3	-3.11	-1.12	NA	0.62	58.1
...llwood	04	25	17	15	0.80	3.20	11.8	120	69	84	77.6	1.06	1.71	1.12	2.05	12.7
...A. Gear	11	11	9	NM	0.00	0.00	19.5	-20	21	47	338.2	1.56	-2.06	NA	0.57	91.2
...lie Fay	12	15	11	9	0.00	0.00	19.0	20	67	113	88.8	1.53	1.69	1.61	2.02	8.4
...Claiborne	12	37	10	14	0.35	0.95	85.6	25	73	459	120.5	2.37	2.65	3.31	3.04	2.3
...ke	05	59	15	14	0.56	0.95	75.4	47	53	311	136.0	3.77	4.33	8.81	4.93	5.1
...xford Industries	05	15	12	14	0.50	3.45	8.8	90	59	30	12.8	0.62	1.07	0.82	1.31	7.6
...illips-Van Heusen	01	16	3	14	0.14	0.89	18.5	119	42	71	74.9	0.96	1.15	1.23	1.38	2.9

Footnotes on page 169

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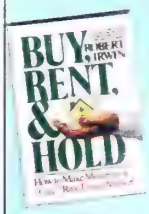

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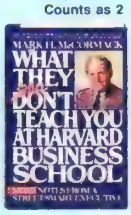

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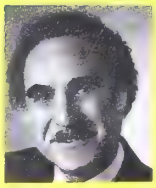

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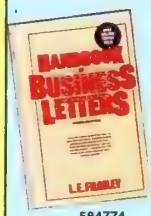

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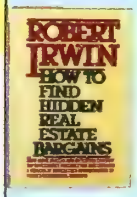

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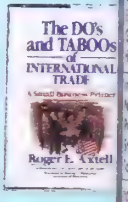

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVI-DEND RATE	YIELD %	SHRS OUT MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURN-OVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CON-SENSUS	1992 ESTIMATES FROM ANALYSTS VARIA-TION %
eebok International	12	27	8	12	0.30	1.12	90.7	85	54	297	120.4	1.54	2.30	2.11	2.70	5.6
ussell	12	27	11	21	0.32	1.19	40.5	18	45	170	36.2	1.65	1.29	1.64	1.90	4.7
ride Rite	11	50	9	20	0.60	1.20	25.6	76	72	270	91.8	2.11	2.53	3.85	3.02	3.6
F	12	35	15	13	1.00	2.85	57.1	92	73	267	48.5	1.35	2.62	2.10	2.96	4.7
PPLIANCES & HOME FURNISHINGS																
ROUP AVERAGE		**20**	**12**	**21**	**0.48**	**2.20**	**44.0**	**62**	**50**	**155**	**68.1**	**0.97**	**1.02**	**1.25**	**1.57**	**28.1**
rmstrong World Industries	12	25	16	16	1.20	4.80	37.1	0	71	265	69.4	3.18	1.60	2.18	2.26	13.7
est Buy	02	32	7	25	0.00	0.00	8.4	472	37	49	138.3	0.55	1.27	0.85	1.59	10.7
rcuit City Stores	02	21	8	14	0.10	0.48	46.7	63	73	237	130.1	1.22	1.44	1.76	1.82	5.5
imball International	06	20	14	14	0.68	3.36	21.1	14	23	59	12.9	2.05	1.42*	1.86	1.60	5.6
a-Z-Boy Chair	04	23	13	15	0.60	2.62	18.0	38	22	63	17.2	1.30	1.54	1.51	1.97	13.7
dd Furniture	12	7	6	58	0.12	1.71	19.0	13	55	56	49.7	0.03	0.12	0.04	0.31	67.7
ggett & Platt	12	36	18	16	0.88	2.46	17.6	37	54	113	37.8	1.67	2.17	2.05	2.66	6.0
asco	12	20	12	26	0.60	2.96	151.0	21	58	356	47.8	0.91	0.79	0.76	1.48	19.6
aytag	12	13	9	17	0.50	3.74	106.3	27	36	232	61.3	0.94	0.81	0.77	1.16	8.6
er 1 Imports	02	8	5	13	0.00	0.00	36.8	64	57	85	137.4	0.17	0.59	0.41	0.74	6.8
ro	07	15	13	19	0.48	3.12	11.9	8	51	67	57.2	1.55	0.81*	1.16	1.37	24.1
hirlpool	12	34	22	13	1.10	3.27	69.6	43	84	335	62.3	1.04	2.52	1.65	2.99	5.7
enith Electronics	12	7	10	NM	0.00	0.00	29.1	3	24	99	63.3	−1.95	−1.86	NA	0.50	178.0
EVERAGES																
ROUP AVERAGE		**43**	**16**	**24**	**0.89**	**1.86**	**319.9**	**12**	**47**	**469**	**41.4**	**2.21**	**2.39**	**2.63**	**2.77**	**8.4**
nheuser-Busch	12	53	15	16	1.12	2.12	284.6	24	55	662	32.3	2.96	3.27	3.85	3.70	1.9
rown-Forman	04	74	23	13	2.24	3.03	27.6	6	43	165	13.8	5.21	5.57	6.10	6.24	2.1
oca-Cola	12	69	6	29	0.96	1.38	665.1	49	53	821	28.2	2.04	2.42	2.71	2.86	1.7
oca-Cola Enterprises	12	13	12	52	0.05	0.38	115.1	−16	43	106	32.1	0.65	0.25	0.38	0.44	27.3
oors (Adolph)	12	19	30	15	0.50	2.60	37.4	−6	30	150	84.2	1.05	1.32	0.78	1.60	14.4
epsiCo	12	30	7	20	0.48	1.62	789.4	14	56	911	57.6	1.37	1.49	1.93	1.78	2.8
ERSONAL CARE																
ROUP AVERAGE		**46**	**13**	**20**	**1.18**	**2.68**	**76.7**	**22**	**55**	**289**	**56.7**	**2.59**	**2.59**	**3.45**	**3.11**	**3.2**
lberto-Culver	09	26	8	24	0.22	0.85	28.2	−23	19	100	19.6	1.30	1.06*	1.59	1.39	1.4
von Products	12	39	3	13	1.40(c)	3.60	71.5	66	73	341	135.3	2.81	2.93	2.72	3.45	2.6
nemed	12	26	14	28	2.00	7.80	9.9	36	59	64	63.4	1.60	0.92	1.58	1.20	11.7
orox	06	37	15	38	1.56	4.20	54.2	−1	49	298	44.1	2.80	0.98*	1.65	2.86	1.4
olgate-Palmolive	12	42	7	17	1.06	2.51	135.4	17	51	508	60.4	2.28	2.55	6.22	2.90	1.7
olab	12	30	14	17	0.70	2.30	23.7	44	67	166	51.5	1.95	1.83	0.92	2.15	4.7
illette	12	43	5	22	0.62	1.45	219.0	53	68	590	66.4	1.60	1.94	5.36	2.29	1.7
elene Curtis Industries	02	36	16	18	0.20	0.55	9.7	42	44	67	49.1	0.70	1.98	1.38	2.32	2.2
tl. Flavors & Fragrances	12	89	23	20	2.40	2.70	38.2	20	56	371	45.9	4.11	4.41	5.26	4.92	1.6
CH	04	59	30	11	1.00	1.70	8.3	9	37	78	17.6	5.19	5.15	7.08	5.70	0.0
rocter & Gamble	06	81	18	16	2.00	2.47	338.3	−9	44	777	42.0	4.49	4.92*	6.93	5.14	2.5
anhome	12	34	11	14	0.92	2.68	19.7	3	72	144	83.4	2.55	2.41	3.21	2.97	5.1
mbrands	12	59	6	23	1.20	2.03	41.1	35	82	248	58.4	2.30	2.53	0.97	3.11	1.6
OBACCO																
ROUP AVERAGE		**35**	**9**	**17**	**1.03**	**3.17**	**266.7**	**96**	**39**	**337**	**48.2**	**3.50**	**2.38**	**2.75**	**2.85**	**4.6**
merican Brands	12	39	19	10	1.75	4.53	202.4	−6	54	535	42.0	2.99	3.87	4.64	4.40	3.9
rooke Group	12	7	−16	14	0.56	8.62	11.3	160	19	30	33.4	15.69	0.48	1.90	0.51	2.0
ibrell Brothers	06	29	7	18	0.48	1.66	13.2	190	38	49	89.5	1.11	1.60*	1.68	1.93	5.2
hilip Morris	12	68	13	15	2.10	3.10	926.3	31	61	1315	49.5	3.83	4.65	5.92	5.65	2.1
JR Nabisco Holdings	12	10	5	31	0.00	0.00	850.4	NA	11	233	NA	−1.19	0.32	0.27	0.63	12.7
andard Commercial	03	26	15	11	0.52	2.04	8.2	135	25	31	30.1	1.41	2.38	1.74	2.93	NM
niversal	06	52	25	15	1.52	2.94	16.4	118	50	116	58.0	2.22	3.43*	2.99	4.01	4.2
ST	12	54	4	23	1.32	2.47	105.8	46	53	385	35.2	1.96	2.32	2.85	2.73	2.2
ONTAINERS & PACKAGING																
IDUSTRY AVERAGE		**31**	**19**	**26**	**0.64**	**2.44**	**32.7**	**33**	**47**	**144**	**54.7**	**1.90**	**0.73**	**2.40**	**2.20**	**24.7**
LASS, METAL & PLASTIC																
ROUP AVERAGE		**50**	**24**	**16**	**0.61**	**1.85**	**21.3**	**81**	**44**	**144**	**43.1**	**2.52**	**3.06**	**3.08**	**3.52**	**8.6**
all	12	33	19	14	1.20	3.65	25.6	42	56	157	50.4	2.03	2.40	1.82	2.75	9.8
onstar International	12	34	16	14	0.64	1.89	9.3	153	36	58	37.7	1.83	2.38	2.59	2.61	10.3
rown Cork & Seal	12	83	36	19	0.00	0.00	29.0	47	41	217	41.4	3.71	4.40	4.84	5.19	5.8
APER																
ROUP AVERAGE		**25**	**17**	**30**	**0.64**	**2.63**	**36.5**	**17**	**48**	**144**	**58.6**	**1.69**	**−0.05**	**2.14**	**1.76**	**30.7**
emis	12	38	12	19	0.84	2.24	25.5	27	41	154	27.9	1.98	2.00	2.63	2.33	3.4
ederal Paper Board	12	25	22	11	1.00	4.04	40.7	36	63	252	117.0	2.58(b)	2.23	4.08	2.66	10.9
aylord Container	09	3	1	NM	0.00	0.00	15.5	0	4	13	29.4	−1.47	−11.68*	NA	−1.00	141.0
ongview Fibre	10	12	7	37	0.52	4.43	51.7	16	30	125	34.6	1.13	0.32*	0.63	0.87	20.7
ashua	12	19	21	25	0.72	3.74	6.3	−44	65	57	86.4	2.73	0.77	1.17	2.46	7.7
onoco Products	12	31	13	14	0.92	2.94	43.2	−4	27	125	26.1	1.16	2.16	2.11	2.57	8.6
t. Joe Paper	12	32	27	49	0.20	0.62	30.5	16	89	69	9.8	1.35	0.65	0.70	1.00	0.0
tone Container	12	20	23	69	0.72	3.60	60.3	75	46	198	144.9	1.59	0.29	0.93	1.09	46.8
emple-Inland	12	42	28	15	0.88	2.10	54.9	33	71	304	51.1	4.20	2.82	4.91	3.87	6.5

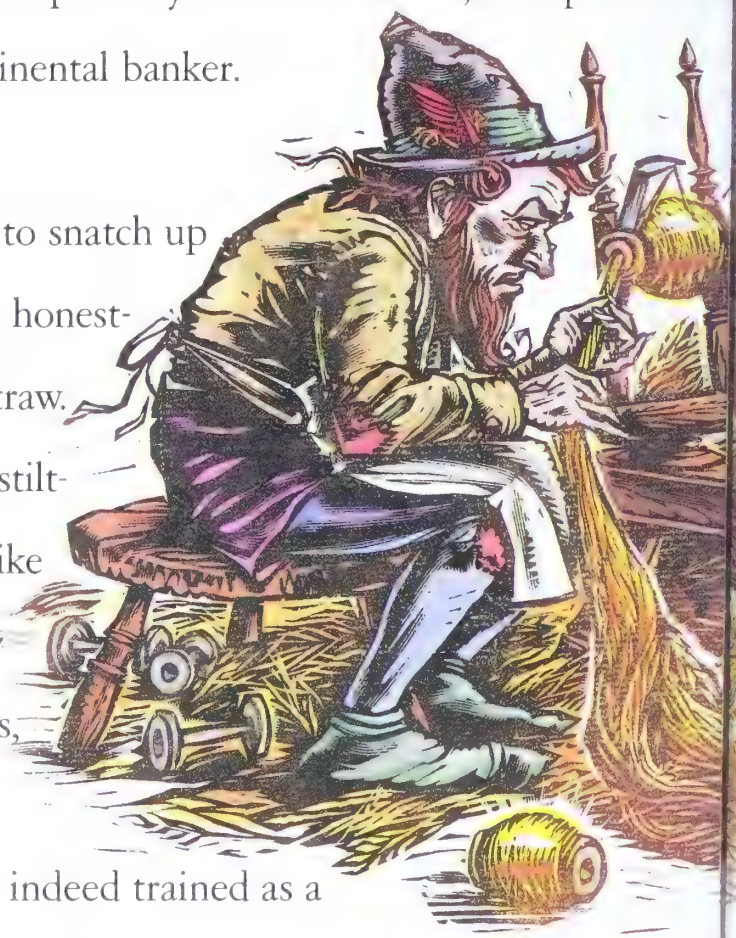
Footnotes on page 169

Sure, he could change straw into gold. But could he convert accounts receivables into cash?

With a good suit, a nice tie and possibly a decent haircut, Rumplestiltskin would have made an excellent Continental banker.

Or would he?

Certainly, we'd be foolish not to snatch up someone who could spin gold—real, honest-to-goodness, 24-carat gold—out of straw.



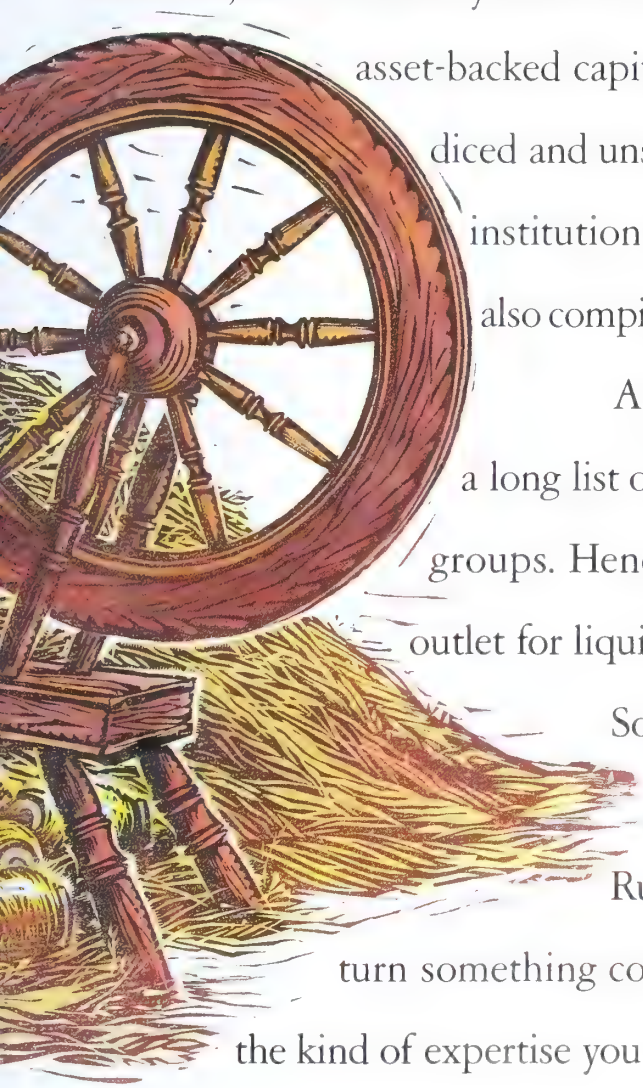
But what if we asked Rumplestiltskin to do something really tricky? Like liquify small ticket leases. Or liquify anything that goes beyond auto loans, mortgages and credit cards.

Well, if Rumplestiltskin were indeed trained as a Continental banker he would most definitely be competent at structuring non-traditional arrangements to liquify nearly any asset.

After all, we've been securely securing securitized products for our customers

r more than 25 years—as long as anyone in the business. In fact, more customers se our securitized products than just about any other bank in the business.

Moreover, we consistently rank with the leaders in volume of privately placed, asset-backed capital products. (It is our unbiased, unprejudiced and unswerving opinion that we are the premier institution serving the middle market today. While also compiling a long list of large corporate customers.)



And our business focus has allied us with a long list of qualified investors and syndicated bank groups. Hence, we can quickly find the appropriate outlet for liquifying all kinds of assets.

So you see, in a very real sense, Continental Bank already has its share of modern day Rumplestiltskins. That is, those who can turn something common into something precious. It's not the kind of expertise you can bank on at every bank.

Now, to get a Continental banker spinning plans for you, just contact our relationship manager. If you're looking for an inventive way to secure capital, we can promise you a fairy tale ending.

Continental Bank
A new approach to business.®

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS OUT. MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
8 **DISCOUNT & FASHION RETAILING**																
INDUSTRY AVERAGE		**28**	**12**	**20**	**0.43**	**1.41**	**94.4**	**64**	**48**	**226**	**90.7**	**1.34**	**1.67**	**2.07**	**2.04**	**12.4**
AutoZone	08	51	5	39	0.00	0.00	34.0	NA	10	60	NA	0.77	1.31*	NA	1.60	2.5
Burlington Coat Factory	06	18	14	13	0.00	0.00	17.7	77	31	44	21.8	1.35	1.40*	1.53	1.64	6.7
Caldor	01	14	10	9	0.00	0.00	14.0	NA	73	58	NA	0.38	1.51	NA	2.21	4.5
Carter Hawley Hale Stores	01	2	−11	19	0.00	0.00	30.3	−54	17	36	51.6	−0.37	0.08	0.06	0.13	138.5
Charming Shoppes	01	21	6	19	0.12	0.57	50.3	89	59	193	204.7	0.79	1.08	0.93	1.27	5.5
Consolidated Stores	01	11	3	28	0.00	0.00	45.8	155	62	103	117.7	0.10	0.37	0.18	0.57	14.0
Costco Wholesale	08	48	8	43	0.00	0.00	76.7	121	60	238	186.8	0.70	1.11*	2.29	1.40	2.1
Dayton Hudson	01	57	29	12	1.44	2.51	71.2	0	80	463	84.5	5.41	4.80	6.86	5.85	8.0
Dillard Department Stores	01	126	40	21	0.24	0.19	37.1	45	49	420	73.1	5.01	6.08	7.45	7.20	2.2
Dollar General	01	20	7	21	0.20	1.01	20.3	169	40	82	170.4	0.73	0.95	1.37	1.11	4.5
Edison Brothers Stores	01	30	17	10	1.04	3.48	21.5	33	45	116	44.6	2.78	3.08	3.69	3.60	5.6
Family Dollar Stores	08	28	8	19	0.44	1.57	27.9	142	53	126	78.5	1.04	1.45*	1.22	1.65	2.4
Fingerhut	12	25	14	12	0.32	1.27	23.0	57	NA	NA	55.9	1.96	2.13	NA	2.49	2.4
Gap	01	53	4	35	0.32	0.61	142.2	220	45	360	85.7	1.02	1.52	1.62	1.84	3.8
Hechinger	01	11	12	14	0.16	1.41	41.7	73	36	93	141.3	0.65	0.83	0.72	1.00	11.0
Home Depot	01	60	7	52	0.12	0.20	209.6	180	59	535	85.9	0.90	1.17	1.82	1.51	4.0
Home Shopping Network	08	5	2	NM	0.00	0.00	87.2	34	21	68	47.6	0.35	−0.09*	NA	0.43	7.0
Jamesway	01	4	8	36	0.00	0.00	13.9	71	35	27	72.0	−1.55	0.10	0.09	0.08	137.5
Kmart	01	39	27	10	1.76	4.56	201.0	37	77	661	70.3	3.78	3.95	3.47	4.38	3.0
Lands' End	01	26	6	21	0.20	0.78	18.8	77	20	49	30.0	0.75	1.21	0.99	1.50	12.7
Limited	01	25	5	21	0.28	1.13	361.3	39	51	498	75.0	1.10	1.17	1.41	1.53	7.8
Lowe's	01	27	20	17	0.56	2.07	36.5	9	48	188	67.8	1.91	1.55	1.94	1.99	10.6
May Department Stores	01	51	21	13	1.62	3.19	123.5	19	66	527	38.7	3.88	4.04	4.75	4.63	3.5
Melville	12	42	15	12	1.44	3.46	103.2	−1	75	471	39.1	3.59	3.41	4.22	4.08	5.1
Mercantile Stores	01	36	32	11	1.02	2.80	36.8	21	39	221	26.3	3.36	3.38	3.56	3.76	3.2
Merry-Go-Round Enterprises	01	12	4	15	0.05	0.46	53.3	7	71	186	153.6	0.73	0.76	1.19	0.96	6.3
Meyer (Fred)	01	22	14	12	0.00	0.00	22.6	73	28	64	56.1	1.37	1.76	1.77	1.98	5.6
Neiman Marcus Group	07	11	−1	NM	0.20	1.84	34.5	−17	32	66	15.1	0.12	−0.45*	NA	0.36	33.3
Nordstrom	01	35	11	19	0.32	0.92	81.8	56	39	259	137.4	1.42	1.79	1.99	2.14	5.1
Penney (J. C.)	01	49	31	12	2.64	5.43	116.6	10	63	530	52.0	4.59	3.93	5.08	5.01	8.0
Pep Boys–Manny, Moe & Jack	01	17	6	24	0.13	0.75	55.6	74	54	210	108.6	0.67	0.71	0.76	0.88	5.7
Petrie Stores	01	20	14	37	0.20	1.00	46.7	22	21	100	36.6	0.06	0.54	0.14	0.67	17.9
Pic 'N' Save	01	20	7	19	0.00	0.00	30.5	118	63	93	199.8	0.52	1.08	0.74	1.30	5.4
Price	08	56	16	21	0.00	0.00	48.5	43	68	286	195.4	2.47	2.68*	3.38	2.94	3.7
QVC Network	01	13	12	28	0.00	0.00	17.8	220	24	34	163.9	−0.98	0.47	NA	0.83	16.9
Rose's Stores	01	5	9	28	0.00	0.00	18.6	54	14	23	58.4	−1.46	0.18	0.14	0.45	0.5
Ross Stores	01	15	6	14	0.00	0.00	23.6	152	48	72	223.6	0.72	1.03	1.30	1.21	5.0
Sears, Roebuck	12	35	38	10	2.00	5.65	344.0	40	59	556	43.9	2.60	3.69	3.11	4.38	7.3
Service Merchandise	12	11	0	9	0.00	0.00	65.5	118	61	110	90.3	0.93	1.19	1.60	1.43	4.9
Spiegel	12	14	9	15	0.36(c)	2.62	52.0	2	8	51	18.1	1.18	0.89	1.14	1.30	5.4
Strawbridge & Clothier	01	22	25	9	1.10(d)	5.03	9.5	19	31	61	28.5	1.82	2.42	2.33	3.25	0.0
TJX	01	15	4	13	0.46	3.17	69.8	33	85	222	75.1	1.06	1.14	0.91	1.41	5.0
Toys 'R' Us	01	28	7	23	0.00	0.00	288.8	25	61	592	64.3	1.11	1.22	1.59	1.52	4.6
U. S. Shoe	01	13	11	13	0.52	4.16	45.3	32	66	141	116.5	−0.61	0.96	1.05	1.42	15.5
Value City Department Stores	07	18	4	16	0.00	0.00	30.5	NA	9	25	NA	0.65	1.16*	NA	0.92	0.0
Venture Stores	01	22	6	9	0.54	2.45	16.2	166	57	155	203.7	2.06	2.38	NA	2.63	1.1
Woolworth	01	16	11	16	0.00	0.00	28.7	48	64	121	164.0	0.64	1.02	NA	1.28	6.3
Wal-Mart Stores	01	49	5	35	0.17	0.35	1148.4	64	29	819	26.3	1.14	1.40	1.89	1.72	1.7
Woolworth	01	25	18	12	1.08	4.26	130.4	−16	66	423	70.9	2.45	2.06	2.60	2.71	10.7
9 **ELECTRICAL & ELECTRONICS**																
INDUSTRY AVERAGE		**31**	**22**	**21**	**0.69**	**2.19**	**64.2**	**20**	**61**	**265**	**78.4**	**1.77**	**1.59**	**3.23**	**2.62**	**12.9**
(a) **ELECTRICAL PRODUCTS**																
GROUP AVERAGE		**32**	**15**	**18**	**1.00**	**2.98**	**91.0**	**15**	**54**	**299**	**48.0**	**1.45**	**1.70**	**2.73**	**2.22**	**9.8**
Cooper Industries	12	50	27	17	1.16	2.30	110.8	24	63	492	39.0	2.81	3.04	3.70	3.50	3.1
Emerson Electric	09	47	14	17	1.38	2.93	224.0	25	65	677	31.1	2.75	2.83*	3.25	3.10	2.6
Genlyte Group	12	5	5	27	0.00	0.00	12.7	30	33	37	71.2	0.55	0.20	NA	0.67	16.4
Hubbell	12	53	17	17	1.56(d)	2.96	29.6	25	48	212	13.7	2.88	3.04	3.50	3.35	1.8
MagneTek	06	13	7	9	0.00	0.00	23.0	21	37	72	57.2	1.40	1.47*	3.06	1.58	5.7
National Service Industries	08	21	13	32	0.96	4.57	49.5	−18	55	196	29.0	2.02	0.65*	1.07	1.56	11.5
Raychem	06	32	18	NM	0.32	0.99	38.2	55	72	209	63.0	−3.12	−0.63*	NA	0.70	28.6
Thomas & Betts	12	53	21	18	2.24	4.21	17.1	13	67	223	41.0	2.84	2.90	3.15	3.36	5.4
Westinghouse Electric	12	16	14	9	1.40	8.89	314.3	−40	49	577	86.8	0.91	1.76	1.38	2.13	13.1
(b) **ELECTRONICS**																
GROUP AVERAGE		**42**	**40**	**21**	**0.77**	**2.12**	**48.0**	**7**	**71**	**291**	**81.4**	**3.56**	**3.05**	**3.82**	**4.26**	**5.5**
E-Systems	12	44	22	11	0.75	2.11	32.4	8	58	238	82.3	3.02	3.37	3.76	3.77	1.3
GM Hughes Electronics	12	1[illegible]	113	13	0.72	4.68	71.4	−30	NA	NA	4.5	1.82	1.14	1.47	1.67	6.0
Harris	06	24	26	48	1.04	4.38	39.1	20	70	228	68.0	3.30	0.50*	1.21	2.43	7.8
Litton Industries	07	89	58	31	0.00	0.00	19.8	8	74	180	65.0	7.26	2.89*	5.75	8.10	4.3
[illegible]al	03	36	29	9	0.96	2.69	31.1	29	75	260	97.8	3.55	3.98	4.22	4.44	2.9
[illegible]rola	12	60	34	17	0.76	1.27	132.1	14	73	644	89.7	3.80	3.43	5.09	4.27	8.0

Footnotes on page 169

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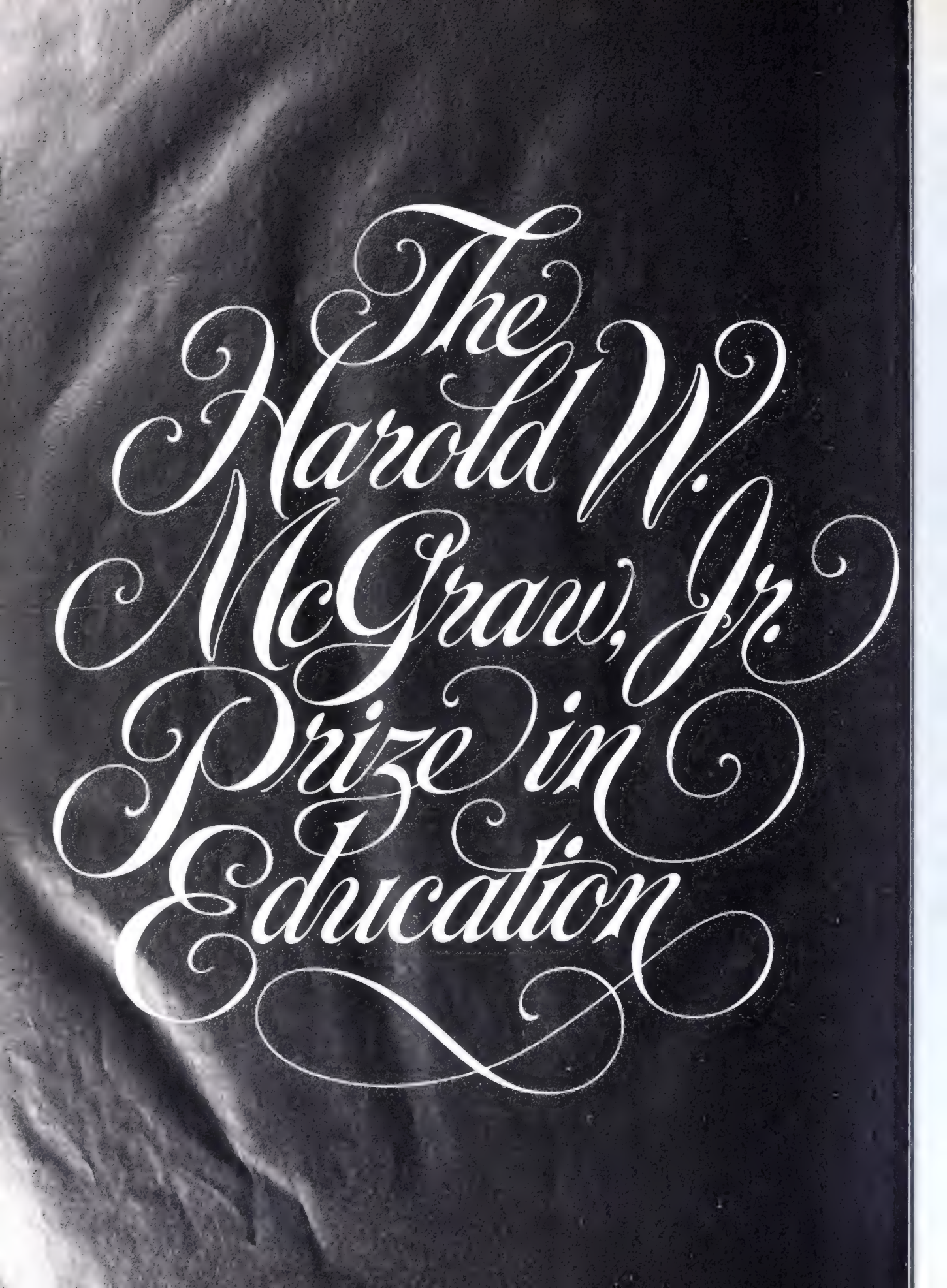

The
Harold W.
McGraw, Jr.
Prize in
Education

Three who make a difference: Announcing the 1991 winners of the McGraw Prize in Education.

The Harold W. McGraw, Jr. prize was established in 1988, in celebration of McGraw-Hill's 100th anniversary and in honor of our chairman emeritus.

Each year, up to three $25,000 prizes are awarded to people who have made a difference in education.

For 1991, the Board of Judges selected these three individuals for distinguished contributions to the advancement of education.

Dr. Judith Lanier

Improved teacher education is integral to education reform. And Michigan State University's School of Education has become a world center for research on teaching and teacher education under the leadership of its dean, Judith Taack Lanier.

Dr. Lanier is the president and driving force behind the Holmes Group, a consortium representing 100 of the nation's top research universities dedicated to improving learning in schools through research and development and high quality teacher preparation.

Her work on the national level is paralleled by her efforts to raise standards for teacher education and teaching in Michigan through the Michigan Partnership for New Education, a collaboration between education, government and business that focuses on increased levels of learning for all students.

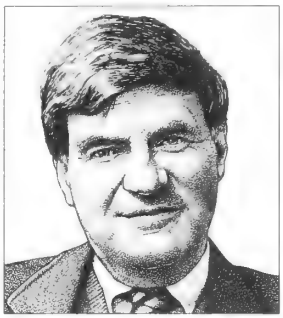
Dr. Robert H. McCabe

Robert H. McCabe has shaped Miami-Dade Community College into an institution that fulfills the role of the American community college: giving every individual—the underprepared as well as those with superior skills—the opportunity for quality higher education.

Under Dr. McCabe's leadership, Miami-Dade has reformed its total educational program, raised student expectations and achievement, and developed comprehensive processes to improve the entire teaching/learning environment.

Dr. McCabe is an innovator who has helped chart the course for the American community college movement. His contributions have placed Miami-Dade in the ranks of the nation's best institutions of higher education.

Dr. Theodore R. Sizer



No two good schools are ever alike. Yet successful schools share powerful guiding ideas that underpin their programs with students.

These ideas have been distilled into a set of common principles by Theodore R. Sizer of Brown University, founder of the Coalition of Essential Schools. The fundamental purpose of schooling is intellectual, according to Dr. Sizer; all students must learn to use their minds well. School programs must establish the essential skills students should master to graduate. Education must be personalized to engage students so they are not mere recipients of instructional services.

Since 1984, the Coalition has been building a network of schools which subscribe to these principles, increasing attendance and the number of students continuing their education while lowering dropout rates.

For more information, write to The Harold W. McGraw, Jr. Prize in Education, McGraw-Hill, Inc., 1221 Avenue of the Americas, New York, NY 10020.

INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
Raytheon	12	79	48	9	2.40	3.03	66.4	15	71	549	73.2	8.53	8.99	10.67	9.72	2.1
SCI Systems	06	7	9	41	0.00	0.00	21.0	-21	62	75	128.3	0.11	0.16*	0.12	0.61	14.8
Varian Associates	09	36	23	12	0.32	0.90	19.1	18	75	154	,124.0	0.64	2.95*	2.04	3.35	2.1
(c) **INSTRUMENTS**																
GROUP AVERAGE		**26**	**18**	**14**	**0.61**	**2.54**	**32.7**	**23**	**61**	**188**	**64.5**	**1.55**	**0.98**	**3.46**	**2.09**	**16.7**
Ametek	12	13	5	15	0.68	5.44	44.0	32	47	134	28.8	0.85	0.86	0.85	1.02	2.9
Beckman Instruments	12	17	11	12	0.28	1.70	29.1	11	69	140	43.8	1.26	1.36	1.25	1.57	5.7
ESCO Electronics	09	7	43	NM	0.00	0.00	11.2	29	41	104	99.5	-0.20	-6.03*	NA	0.14	114.3
Honeywell	12	59	25	13	1.65	2.78	69.7	31	74	430	70.6	4.90	4.68	16.67	5.17	3.1
Imo Industries	12	12	20	12	0.50	4.35	16.9	4	51	78	43.9	1.20	0.98	1.03	1.45	15.2
Johnson Controls	09	32	22	15	1.24	3.91	39.5	27	59	223	46.5	2.05(b)	2.11*	2.11	2.61	6.9
Millipore	12	35	16	16	0.48	1.36	27.9	-2	70	237	60.7	1.00	2.16	1.73	2.46	3.7
Perkin-Elmer	07	28	8	NM	0.68	2.40	33.7	35	70	203	76.4	1.10	-0.08*	NA	1.72	4.7
Tektronix	05	17	15	9	0.60	3.50	29.5	-6	69	194	106.1	1.66	1.83	1.79	2.52	4.4
Thermo Electron	12	41	18	21	0.00	0.00	25.7	73	48	137	68.5	1.65	1.93	2.28	2.23	6.3
(d) **SEMICONDUCTORS**																
GROUP AVERAGE		**22**	**12**	**33**	**0.31**	**0.77**	**95.5**	**37**	**59**	**299**	**133.7**	**0.22**	**0.47**	**2.32**	**1.78**	**21.2**
Advanced Micro Devices	12	14	8	22	0.00	0.00	83.9	200	42	188	281.7	-0.78	0.64	NA	1.20	22.5
AMP	12	51	17	21	1.44	2.81	105.7	18	75	515	42.6	2.70	2.50	3.17	2.94	4.8
Analog Devices	10	8	8	44	0.00	0.00	47.2	14	64	103	71.9	-0.28	0.17*	0.22	0.74	17.6
Intel	12	41	21	11	0.00	0.00	202.6	8	71	714	255.5	3.20	3.84	5.58	4.10	7.3
LSI Logic	12	7	7	37	0.00	0.00	43.2	21	47	74	68.3	-0.80	0.20	0.32	0.52	21.2
National Semiconductor	05	6	5	61	0.00	0.00	103.9	27	51	157	101.4	-1.55	0.09	NA	0.70	25.7
Texas Instruments	12	28	21	NM	0.72	2.58	82.1	-26	65	340	114.5	-0.92	-4.16	NA	2.26	49.6
10 **FOOD**																
INDUSTRY AVERAGE		**30**	**11**	**19**	**0.63**	**2.04**	**67.6**	**16**	**41**	**189**	**46.3**	**1.72**	**1.91**	**2.30**	**2.20**	**5.8**
(a) **FOOD DISTRIBUTION**																
GROUP AVERAGE		**24**	**13**	**14**	**0.57**	**2.48**	**33.3**	**3**	**51**	**156**	**50.4**	**1.80**	**1.83**	**2.26**	**2.05**	**6.3**
Fleming	12	35	28	11	1.20	3.47	35.4	14	69	251	76.9	3.06	3.26	3.91	3.60	4.7
Nash Finch	12	17	16	10	0.70(c)	4.12	10.9	-1	31	49	28.4	1.64	1.75	1.67	1.97	3.0
Rykoff-Sexton	04	18	16	14	0.60	3.29	11.6	15	58	55	36.9	1.19	1.29	1.29	1.37	18.2
Smart & Final	12	17	1	17	0.00	0.00	8.3	NA	23	23	NA	1.14	0.97	NA	1.02	2.9
Super Food Services	08	14	12	12	0.34	2.47	10.8	-15	64	67	58.7	1.60	1.13*	1.51	1.47	9.5
Super Valu Stores	02	26	14	12	0.72	2.78	75.3	9	64	297	46.9	2.06	2.18	2.62	2.41	4.6
Sysco	06	40	10	24	0.28	0.69	92.9	21	56	372	45.7	1.45	1.67*	2.09	1.94	1.5
Wetterau	03	23	11	10	0.68	2.99	21.2	-23	40	136	59.4	2.23	2.36	2.71	2.59	6.2
(b) **FOOD PROCESSING**																
GROUP AVERAGE		**39**	**12**	**24**	**0.83**	**2.25**	**83.5**	**17**	**42**	**240**	**47.8**	**1.90**	**2.21**	**2.56**	**2.57**	**5.4**
Archer Daniels Midland	06	27	13	18	0.10(d)	0.37	303.1	22	52	520	56.1	1.55	1.49*	1.95	1.76	4.5
Borden	12	30	13	13	1.14	3.82	147.5	0	51	476	48.4	2.46	2.36	2.80	2.60	3.5
Campbell Soup	07	78	14	25	1.16	1.49	127.0	33	33	343	29.9	0.03	3.16*	0.18	3.84	2.1
Chiquita Brands International	12	41	18	16	0.60	1.48	45.6	28	77	178	78.1	2.23	2.55	2.97	2.90	3.4
ConAgra	05	30	9	18	0.54	1.79	225.2	36	24	374	43.5	1.42	1.65	1.91	1.93	3.1
CPC International	12	82	18	16	2.20	2.70	75.6	-2	61	534	55.8	4.83	5.24	6.28	5.86	1.5
Curtice-Burns Food	06	11	12	25	0.64	6.10	8.9	-32	27	40	19.2	0.87(b)	0.42*	0.63	0.80	12.5
Dean Foods	05	30	11	15	0.56	1.87	40.8	12	35	131	32.5	1.79	1.98	2.34	2.22	3.2
Dole Food	12	36	17	14	0.40	1.11	59.3	23	51	197	73.1	2.03	2.52	2.64	3.05	12.5
Flowers Industries	06	14	6	20	0.69	4.89	33.9	4	36	95	35.0	0.98	0.71*	0.84	0.94	6.4
General Mills	05	65	7	21	1.48	2.27	165.6	34	61	589	34.4	2.82	3.04	3.89	3.49	1.7
Gerber Products	03	69	11	18	1.44	2.10	37.4	24	55	290	52.8	3.00	3.82	5.42	4.31	2.6
Heinz (H. J.)	04	37	9	17	1.08	2.91	258.8	7	48	520	40.3	2.13	2.17	2.60	2.56	5.5
Hershey Foods	12	38	15	16	0.98	2.58	90.2	1	27	291	26.1	2.39	2.40	2.75	2.68	2.2
Hormel (Geo. A.)	10	20	7	18	0.30	1.47	76.8	7	18	87	19.1	1.01	1.13*	1.41	1.31	3.8
Hudson Foods	09	8	9	14	0.12	1.45	13.9	3	8	24	13.9	0.60	0.58*	0.55	0.79	25.3
IBP	12	14	10	233	0.60	4.29	47.3	-33	36	103	123.2	1.01	0.06	0.05	1.07	16.8
Imperial Holly	03	15	14	7	0.48	3.15	10.2	-6	45	26	7.0	2.13	2.25	2.08	2.35	NM
International Multifoods	02	25	17	12	0.80	3.20	19.5	2	57	116	55.9	1.81	2.02	2.34	2.21	3.2
Interstate Bakeries	05	17	8	12	0.11	0.66	20.9	NA	24	23	NA	-1.70	1.37	NA	1.60	3.1
Kellogg	12	107	17	21	2.24	2.09	120.4	41	74	453	27.2	4.16	5.04	5.44	5.69	2.3
McCormick	11	41	9	21	0.60	1.45	40.1	61	47	173	81.6	1.66	1.93	2.52	2.25	2.2
Pioneer Hi-Bred International	08	61	23	18	1.16	1.92	30.2	65	55	145	52.2	2.33	3.44*	3.21	3.74	5.6
Quaker Oats	06	68	12	22	1.72	2.52	76.3	30	50	407	48.7	2.93	3.05*	3.32	3.55	1.4
Ralston Purina	9	53	7	16	1.07	2.03	111.0	3	48	364	45.1	3.23	3.34*	3.76	3.84	3.9
Sara Lee	6	49	10	23	1.00(c)	2.03	232.7	56	45	597	36.8	1.91	2.15*	2.61	2.43	1.6
Savannah Foods & Industries	12	16	8	10	0.48	3.10	26.8	-36	39	70	58.6	1.80	1.50	2.82	1.52	3.3
Smithfield Foods	04	17	7	9	0.00	0.00	13.8	93	38	60	161.8	1.99	2.00	2.24	2.42	10.3
Tyson Foods	09	19	6	18	0.04	0.21	137.4	22	12	106	52.4	0.91	1.05*	1.33	1.19	1.7
Universal Foods	09	38	11	17	0.84	2.22	25.7	19	59	138	35.3	1.95	2.18*	3.08	2.45	1.2
WLR Foods	06	15	11	15	0.32	2.08	10.5	1	3	14	21.8	1.67	1.02*	1.16	1.32	15.9
Wrigley (Wm.) Jr.	12	63	11	19	1.62	2.58	39.2	23	23	203	15.9	2.99	3.25	4.32	3.56	1.7

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS. OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
FOOD RETAILING																
GROUP AVERAGE		**20**	**9**	**14**	**0.34**	**1.57**	**56.6**	**19**	**36**	**120**	**42.9**	**1.41**	**1.47**	**1.81**	**1.71**	**6.3**
Albertson's	01	34	8	17	0.56	1.66	132.9	−8	38	381	43.6	1.75	1.95	2.52	2.22	3.2
American Stores	01	30	21	10	0.70	2.36	69.2	8	82	289	55.7	2.64	2.94	2.78	3.26	5.5
Bruno's	06	13	5	16	0.20	1.55	81.9	−16	34	145	87.8	0.74	0.82*	0.99	0.82	4.9
Casey's General Stores	04	16	8	17	0.12	0.77	11.0	202	44	44	128.8	0.81	0.90	0.85	1.00	16.0
Eagle Food Centers	01	7	5	8	0.00	0.00	11.2	25	73	28	49.8	−0.16	0.90	NA	1.00	9.0
Food Lion	12	21	2	32	0.15	0.73	322.4	56	6	96	13.7	0.54	0.65	0.86	0.77	0.0
Giant Food	02	22	10	14	0.66	3.00	59.5	−22	30	199	33.6	2.01	1.61	2.43	1.81	9.9
Great Atlantic & Pacific Tea	02	26	33	11	0.80	3.03	38.2	−40	36	178	36.5	3.95	2.48	3.87	3.09	11.0
Hannaford Brothers	12	42	14	19	0.52	1.24	20.0	18	36	86	21.6	2.13	2.17	2.79	2.63	3.4
Ingles Markets	09	7	8	10	0.22	3.32	17.9	−7	4	17	26.9	0.56	0.65	0.69	0.76	9.2
Kroger	12	17	−32	14	0.00	0.00	87.6	24	39	228	68.9	0.96	1.27	1.07	1.71	8.8
Marsh Supermarkets	03	16	11	9	0.44	2.84	7.8	−11	27	31	33.0	1.65	1.70	2.05	2.15	NM
Riser Foods	06	9	5	8	0.00	0.00	8.1	6	36	34	43.8	0.68	1.20*	NA	1.30	6.9
Ruddick	09	14	10	12	0.39(c)	2.74	22.9	49	58	53	21.7	1.09(b)	1.17*	1.33	1.27	5.5
Safeway	12	16	3	13	0.00	0.00	97.5	58	16	99	47.4	0.91	1.20	NA	1.45	2.1
Schultz Sav-O Stores	12	14	13	11	0.12	0.87	2.9	15	35	23	38.8	1.51	1.25	1.37	1.50	0.0
Smith's Food & Drug Centers	12	32	16	19	0.36	1.14	30.0	28	28	90	41.4	1.36	1.65	NA	1.96	4.1
Village Super Market	07	8	18	13	0.15	1.82	2.9	0	NA	NA	24.5	1.40	0.64*	0.84	0.65	NM
Weis Markets	12	25	10	15	0.00	0.00	43.2	22	38	124	63.3	1.28	1.64	NA	2.00	5.0
Winn-Dixie Stores	06	36	11	16	1.20	3.37	77.1	9	18	188	13.0	1.93	2.20*	2.31	2.38	2.1
FUEL																
INDUSTRY AVERAGE		**32**	**19**	**31**	**1.15**	**3.22**	**147.0**	**2**	**52**	**355**	**49.7**	**2.38**	**1.87**	**3.29**	**2.54**	**15.9**
COAL																
GROUP AVERAGE		**23**	**22**	**57**	**0.45**	**2.07**	**23.4**	**−1**	**45**	**113**	**45.3**	**2.07**	**1.23**	**1.53**	**2.25**	**12.8**
Alliance Industries	12	41	38	19	0.62	1.53	8.9	34	59	115	35.9	3.49	2.15	2.98	4.04	10.1
Alterco	12	18	16	15	0.64	3.61	39.2	−4	13	67	12.6	2.05	1.21	1.53	1.66	17.5
Pittston	12	17	14	11	0.20	1.20	37.3	−13	67	177	92.2	1.24	1.46	1.38	1.76	7.4
Westmoreland Coal	12	17	19	183	0.32	1.94	8.3	−20	40	93	40.5	1.51	0.09	0.21	1.53	16.3
OIL & GAS																
GROUP AVERAGE		**35**	**20**	**30**	**1.33**	**3.45**	**167.2**	**4**	**51**	**372**	**45.4**	**2.60**	**2.03**	**3.40**	**2.72**	**17.3**
Amerada Hess	12	47	38	29	0.60	1.27	81.1	2	59	398	55.6	5.96	1.62	3.29	2.88	17.7
Amoco	12	47	29	14	2.20	4.64	497.3	−10	50	863	25.4	3.77	3.30	4.74	3.70	7.8
Ashland Oil	09	28	24	11	1.00	3.57	59.9	7	46	232	39.9	3.27	2.56*	2.46	3.25	7.4
Atlantic Richfield	12	103	43	16	5.50	5.36	157.6	−18	57	836	45.1	10.20	6.60	11.86	8.63	15.5
Burlington Resources	12	38	22	26	0.70	1.85	132.5	−4	61	507	57.9	1.46	1.44	2.57	1.77	12.4
Chevron	12	67	43	15	3.30	4.94	349.9	−8	43	781	27.0	6.10	4.47	4.39	5.22	9.6
Coastal	12	27	20	15	0.40	1.50	103.7	−17	64	389	68.2	2.15	1.75	2.97	2.61	10.3
Crown Central Petroleum	12	24	33	10	0.80(c)	3.35	9.8	3	9	32	10.8	2.65(b)	2.38	1.98	3.18	18.6
Diamond Shamrock	12	21	15	10	0.52	2.51	28.4	26	66	116	63.9	3.04	2.03	4.76	2.56	13.3
Exxon	12	59	27	13	2.68	4.57	1242.8	13	38	982	20.5	3.96	4.46	3.87	4.55	8.8
Holly	07	28	4	20	0.60	2.14	8.3	24	56	38	6.9	2.90	1.42*	3.35	4.00	8.3
Kerr-McGee	12	38	31	18	1.52	4.00	48.2	−16	66	326	45.6	2.26	2.15	2.50	2.73	14.3
Louisiana Land & Exploration	12	33	16	32	1.00	3.04	28.3	−22	73	207	50.0	1.94	1.04	1.71	1.58	27.8
Maapco	12	62	12	14	1.00	1.61	30.0	47	77	203	64.6	4.13	4.36	5.85	5.26	3.6
Maxus Energy	12	8	0	25	0.00	0.00	100.6	−15	62	234	102.5	−0.38	0.30	NA	0.03	800.0
Mitchell Energy & Development	01	16	13	16	0.40	2.56	46.8	−15	26	86	18.1	1.01	0.95	1.47	1.19	12.6
Mobil	12	65	41	13	3.20	4.94	398.6	11	54	935	36.7	4.60	4.86	5.51	5.08	7.1
Murphy Oil	12	33	25	22	1.20	3.60	44.9	14	45	169	31.3	3.00	1.51	2.45	2.25	15.1
Occidental Petroleum	12	19	14	18	1.00	5.19	298.4	6	28	417	61.2	−5.80	1.06	1.26	1.45	22.8
Oryx Energy	12	26	7	371	1.20	4.62	79.7	−28	43	306	48.0	2.26	0.07	NA	0.69	69.6
Pennzoil	12	59	31	32	3.00	5.11	40.4	−11	65	286	38.2	2.37	1.81	3.58	2.41	23.2
Phillips Petroleum	12	23	11	16	1.12	4.92	259.7	−13	45	466	42.4	2.18	1.42	2.84	2.05	12.7
Quaker State	12	14	11	19	0.80	5.82	27.1	28	46	96	60.1	0.72	0.74	0.43	0.92	8.7
Sun	12	27	26	19	1.80	6.70	106.0	−4	56	281	24.9	1.86	1.40	0.76	2.38	22.3
Tesoro Petroleum	09	6	10	NM	0.00	0.00	14.1	−15	27	28	33.9	0.96	−0.37*	NA	0.67	16.4
Texaco	12	58	33	12	3.20	5.49	258.5	−4	63	899	50.6	5.18	4.68	6.92	5.21	10.0
Tosco	12	23	16	13	0.60	2.64	29.9	52	38	117	109.0	3.94(b)	1.81	3.46	3.04	33.2
Union Texas Petroleum Holdings	12	20	7	21	0.20	0.98	85.3	35	13	73	20.7	0.81	0.97	3.25	1.43	16.8
Unocal	12	22	11	31	0.70	3.15	234.6	−15	60	539	61.5	1.71	0.72	1.13	1.42	24.6
Unocal Exploration	12	10	3	19	0.40	3.95	251.5	−10	NA	NA	1.4	0.65	0.52	0.58	0.64	32.8
USX–Marathon Group	12	27	14	31	1.40	5.19	256.0	NA	69	501	NA	1.94	0.87	5.42	1.47	23.1
Valero Energy	12	29	17	13	0.36	1.25	40.6	88	66	186	84.5	2.31	2.20	3.31	2.89	10.7
PETROLEUM SERVICES																
GROUP AVERAGE		**27**	**13**	**18**	**0.66**	**2.77**	**121.6**	**−10**	**62**	**431**	**75.0**	**1.41**	**1.41**	**4.02**	**1.77**	**10.8**
Baker Hughes	09	19	11	15	0.46	2.45	138.0	−27	73	462	90.7	1.06	1.26*	1.93	1.40	8.6
Baroid	12	5	4	15	0.20	3.90	74.3	−14	51	144	58.0	0.28	0.34	NA	0.45	11.1
BJ Industries	12	29	14	19	0.48	1.64	36.5	23	70	139	56.9	1.58	1.57	2.98	1.96	5.1
Dresser Industries	10	18	13	17	0.60	3.33	134.3	−15	65	436	79.3	1.29	1.07	9.65	1.46	13.0
Halliburton	12	30	21	23	1.00	3.35	107.0	−34	63	507	108.9	1.85	1.31	2.49	1.89	21.2
Schlumberger	12	61	15	21	1.20	1.97	239.5	6	50	898	56.3	2.40	2.89	3.03	3.43	6.1

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COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVI DEND RATE	YIELD %	SHRS OUT MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURN-OVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CON-SENSUS	1992 ESTIMATES FROM ANALYSTS VARIA-TION %
12 HEALTH CARE																
INDUSTRY AVERAGE		**42**	**11**	**22**	**0.67**	**1.49**	**118.6**	**47**	**57**	**350**	**110.6**	**1.67**	**2.12**	**2.67**	**2.48**	**5.0**
(a) **DRUG DISTRIBUTION**																
GROUP AVERAGE		**24**	**10**	**19**	**0.41**	**1.72**	**36.9**	**23**	**48**	**159**	**93.2**	**1.18**	**1.37**	**1.62**	**1.61**	**6.4**
Bergen Brunswig	08	17	11	12	0.40	2.30	41.2	−25	68	166	95.9	1.46	1.50*	2.11	1.55	9.0
Bindley Western Industries	12	17	9	14	0.06	0.35	6.7	44	38	44	163.9	1.00	1.21	1.13	1.39	13.0
Cardinal Distribution	03	27	11	21	0.08	0.30	18.8	39	66	120	156.2	1.01(b)	1.24	1.54	1.53	2.0
Drug Emporium	02	7	4	21	0.12	1.85	13.0	−16	13	25	82.3	0.50	0.31	0.36	0.65	6.2
Durr-Fillauer Medical	12	20	11	14	0.28	1.44	12.7	−9	62	85	124.4	1.34(b)	1.42	1.89	1.60	4.4
Fay's	01	9	5	14	0.20	2.16	15.6	18	23	54	44.9	0.80	0.68	1.12	0.93	12.9
Longs Drug Stores	01	35	20	12	1.08	3.11	20.4	−6	37	174	34.1	2.94	2.89	3.55	3.12	7.1
McKesson	03	34	15	13	1.60	4.65	38.4	2	55	231	40.7	2.46	2.55	2.58	2.88	4.5
Medco Containment Services	06	70	9	65	0.04	0.06	55.5	136	70	286	214.7	−0.16	1.07*	1.65	1.43	3.5
Perry Drug Stores	10	8	5	14	0.00	0.00	10.2	64	16	23	48.9	0.06	0.56	0.21	0.76	10 5
Rite Aid	02	18	10	12	0.50	2.76	87.8	4	72	301	66.6	1.30	1.46	1.46	1.65	2.4
Walgreen	08	32	9	21	0.52	1.61	123.1	26	45	393	45.7	1.42	1.58*	1.85	1.80	1.7
(b) **DRUGS & RESEARCH**																
GROUP AVERAGE		**65**	**10**	**22**	**1.35**	**2.14**	**230.1**	**43**	**54**	**600**	**79.7**	**2.49**	**3.11**	**3.79**	**3.65**	**3.3**
Allergan	12	22	8	17	0.36	1.63	67.3	27	75	204	57.3	1.21	1.32	NA	1.54	3.9
American Home Products	12	74	9	17	2.60	3.50	314.9	41	60	838	35.5	3.92	4.32	4.80	4.80	2.7
Amgen	12	56	3	45	0.00	0.00	130.5	178	68	359	360.1	0.26	1.24	2.75	1.73	11 0
Bristol-Myers Squibb	12	79	10	20	2.40	3.06	521.4	17	60	1253	44.7	3.33	3.96	3.61	4.69	1.3
Carter-Wallace	03	99	26	26	1.00	1.01	15.3	85	35	107	45.3	3.37	3.77	4.34	4.30	1.6
Lilly (Eli)	12	74	17	16	2.00	2.72	292.3	10	66	790	56.6	3.91	4.51	5.71	5.26	2.1
Marion Merrell Dow	12	32	5	16	0.92	2.88	276.3	−12	10	206	28.5	1.73	2.05	3.48	2.37	3.4
Merck	12	146	11	27	2.52	1.72	386.6	63	56	1054	38.7	4.56	5.45	7.39	6.44	1.6
Pfizer	12	66	15	24	1.32	1.99	330.6	65	68	862	59.3	2.39	2.72	2.72	3.22	2.5
Rhone-Poulenc Rorer	12	55	6	24	0.48	0.87	137.7	57	21	151	24.8	0.01	2.31	0.60	3.08	7.5
Schering-Plough	12	59	9	20	1.32	2 24	211.9	27	62	724	81.9	2.50	2.99	3.75	3.51	2.3
Syntex	07	38	4	20	0.92	2.40	225.1	30	56	645	84.9	1.53	1.89*	2.19	2.24	2.7
Upjohn	12	40	9	14	1.36	3.43	176.5	4	49	498	114.1	2.48	2.84	3.11	3.17	2.5
Warner-Lambert	12	70	12	17	1.76	2.53	134.4	3	64	710	83.6	3.61	4.16	4.78	4.78	1.0
(c) **HEALTH CARE SERVICES**																
GROUP AVERAGE		**22**	**8**	**23**	**0.16**	**0.77**	**63.3**	**60**	**62**	**187**	**166.3**	**1.11**	**1.50**	**2.23**	**1.73**	**6.9**
Beverly Enterprises	12	8	7	21	0.00	0.00	73.5	5	69	191	137.1	0.19	0.38	NA	0.58	20.7
FHP International	06	11	8	8	0.00	0.00	32.2	−9	61	149	243.4	1.00	1.37*	1.87	1.05	18 1
Foundation Health	06	28	7	14	0.00	0.00	12.5	290	67	107	222.6	1.38	2.00*	NA	2.38	5.5
Hillhaven	05	2	2	119	0.00	0.00	104.0	37	31	95	55.1	0.02	0.02	NA	0.01	NM
Humana	08	24	12	11	0.90	3.73	158.0	−13	73	484	76.8	2.05	2.26*	3.86	2.45	3.7
Lifetime	12	24	17	12	0.00	0.00	9.0	21	53	73	93.2	1.93	1.92	2.98	2.37	4.6
Manor Care	05	20	7	18	0.13	0.66	38.1	17	52	138	50.2	0.84	1.09	0.87	1.34	8 2
National Health Laboratories	12	24	3	24	0.26	1.08	99.1	119	44	182	77.8	0.83	1.02	1.31	1.25	4.0
National Medical Enterprises	05	13	10	8	0.46	3.57	175.6	−24	68	441	94.0	1.54(b)	1.64	1.96	1.84	4.3
PacifiCare Health Systems	09	24	8	11	0.00	0.00	11.4	46	30	59	226.1	1.48	2.20*	3.72	2.40	3.8
U.S. Healthcare	12	36	5	18	0.33	0.92	64.0	68	74	227	402.4	1.08	1.99	1.89	2.37	3.8
United HealthCare	12	60	9	25	0.03	0.05	31.4	199	89	217	335.8	1.29	2.37	2.57	3.02	3.0
Universal Health Services	12	11	13	9	0.00	0.00	13.7	21	67	64	146.5	0.84	1.26	1.33	1.42	2.1
(d) **MEDICAL PRODUCTS**																
GROUP AVERAGE		**57**	**15**	**26**	**0.67**	**1.26**	**132.6**	**65**	**64**	**440**	**102.4**	**1.86**	**2.42**	**2.93**	**2.87**	**3.5**
Abbott Laboratories	12	58	7	23	1.00	1.74	427.0	27	51	857	32.7	2.22	2.56	3.05	2.96	0.
Bard (C. R.)	12	27	7	25	0.48	1.76	53.0	60	70	276	109.2	0.76	1.08	1.03	1.36	4.
Bausch & Lomb	12	52	15	21	0.72	1.39	59.5	46	79	335	58.0	2.19	2.51	2.90	2.89	1.4
Baxter International	12	36	14	18	0.74	2.03	281.6	32	61	652	50.8	−0.05	2.02	2.73	2.35	2.
Becton, Dickinson	09	59	32	12	1 16	1.97	37.7	−21	72	369	94.8	4.67	4.86*	5.73	5.20	4.
Johnson & Johnson	12	96	16	22	1.60	1.66	333.1	34	52	1045	51.0	3.43	4.38	6.38	5.12	1.
Medtronic	04	75	12	28	0.48(c)	0.64	59.6	76	69	414	68.8	2.25	2.67	3.03	3.14	1.
Owens & Minor	12	20	7	22	0.21	1.07	12.9	100	43	55	78.1	0.69	0.88	0.63	1.03	2.
U.S. Surgical	12	93	6	61	0.30	0.32	51.9	178	67	277	144.3	0.89	1.53	1.79	2.17	4.
Westmark International	12	52	30	31	0.00	0.00	9.6	114	75	122	335.8	1.61	1.67	2.07	2.44	9.
13 HOUSING & REAL ESTATE																
INDUSTRY AVERAGE		**22**	**14**	**19**	**0.62**	**2.86**	**36.4**	**30**	**49**	**133**	**56.8**	**1.50**	**1.18**	**1.75**	**1.86**	**16.**
(a) **BUILDING MATERIALS**																
GROUP AVERAGE		**25**	**12**	**19**	**0.56**	**1.83**	**48.4**	**18**	**49**	**159**	**44.1**	**1.82**	**1.10**	**1.99**	**1.80**	**13.**
afarge	12	12	15	27	0.30	2.53	56.3	−2	13	64	11.7	0.97	0.44	0.81	0.69	46.
Manville	12	7	5	21	0.00	0.00	48.1	60	32	61	14.7	0.74	0.35	0.27	0.62	6.
Owens-Corning Fiberglas	12	18	8	15	0.00	0.00	40.9	11	69	163	122.7	1.78	1.21	2.43	2.37	30.
PPG Industries	12	46	25	17	1.84	4.01	106.2	−2	47	443	37.6	4.43	2.68	3.85	3.97	7
RPM	05	19	7	16	0.68	3.58	31.1	11	38	112	65.4	1.03	1.18	1.36	1.31	3
Sherwin-Williams	12	22	10	15	0.42	1.93	87.6	18	63	299	50.0	1.41	1.48	1.60	1.72	4
Southdown	12	13	19	NM	0.00	0.00	16.9	4	49	77	55.3	0.44	−1.74	NA	0.07	485
Valspar	10	54	13	21	0.60	1.11	10.9	51	62	77	19.3	2.45	2.53*	3.08	3.03	2
Vulcan Materials	12	37	18	21	1.20	3.27	38.0	8	57	139	20.0	3.10	1.76	2.52	2.46	8

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVI-DEND RATE	YIELD %	SHRS OUT MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURN-OVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CON-SENSUS	1992 ESTIMATES FROM ANALYSTS VARIA-TION %
CONSTRUCTION & REAL ESTATE																
GROUP AVERAGE		**18**	**18**	**19**	**0.69**	**4.18**	**20.8**	**45**	**49**	**99**	**73.1**	**1.09**	**1.27**	**1.47**	**1.95**	**19.6**
sset Investors	12	15	15	7	2.80	18.21	14.0	93	10	19	97.5	2.11	2.17	1.75	2.55	7.1
entex	03	35	32	16	0.40	1.14	15.1	18	83	169	72.7	2.83	2.24	3.01	3.19	16.6
aufman & Broad Home	11	13	8	17	0.30	2.24	28.7	50	52	151	114.9	1.25	0.77	1.15	1.48	11.5
erini	12	10	35	45	0.00	0.00	3.9	27	32	33	48.7	−1.20	0.22	0.24	1.03	62.1
HM	12	18	14	14	0.12	0.67	23.8	94	48	129	42.9	1.18	1.27	2.00	1.85	6.5
ouse	12	14	0	12	0.60(c)	4.21	48.2	−3	41	100	56.0	−0.07	1.21	0.86	1.43	14.0
yland Group	12	21	18	21	0.60	2.81	12.3	36	75	90	78.7	1.53	1.04	1.30	2.10	19.5
LEISURE TIME INDUSTRIES																
INDUSTRY AVERAGE		**23**	**12**	**19**	**0.33**	**1.26**	**69.0**	**39**	**54**	**203**	**96.6**	**0.82**	**1.18**	**2.06**	**1.86**	**12.2**
EATING PLACES																
GROUP AVERAGE		**16**	**6**	**14**	**0.22**	**1.32**	**87.7**	**34**	**48**	**178**	**77.3**	**0.88**	**1.13**	**1.35**	**1.29**	**11.5**
ob Evans Farms	04	21	8	17	0.28	1.37	31.3	45	30	96	75.8	1.07	1.19	1.28	1.30	8.5
archer (Carl) Enterprises	01	8	5	11	0.08	1.03	17.9	26	34	39	60.1	0.72	0.72	0.67	0.94	5.3
cDonald's	12	34	12	14	0.37	1.10	357.7	15	59	717	62.9	2.20	2.37	2.82	2.67	2.2
orrison	05	23	11	12	0.64	2.81	16.4	36	38	85	116.5	1.61	1.84	1.92	2.16	4.6
honey's	10	20	−7	22	0.00	0.00	39.6	73	64	162	56.1	0.76	0.92	0.64	1.12	3.6
zzler International	04	10	10	11	0.16	1.62	29.7	NA	66	91	NA	0.85	0.94	0.97	1.15	4.3
W Holdings	12	3	1	5	0.00	0.00	111.8	−1	62	47	45.8	−0.61	0.56	NA	0.35	57.1
endy's International	12	9	5	18	0.24	2.67	97.0	44	35	185	124.1	0.40	0.51	1.14	0.61	6.6
ENTERTAINMENT																
GROUP AVERAGE		**32**	**15**	**20**	**0.28**	**0.50**	**87.2**	**−18**	**34**	**340**	**90.0**	**1.29**	**1.19**	**2.65**	**1.98**	**6.3**
ockbuster Entertainment	12	11	2	20	0.00	0.00	155.4	−8	40	224	192.8	0.43	0.56	1.13	0.75	5.3
ommtron	08	6	7	8	0.00	0.00	10.1	2	NA	NA	9.0	0.90	0.75*	0.93	1.00	NM
isney (Walt)	09	105	28	22	0.70	0.67	130.1	3	41	690	81.7	6.00	4.78*	7.87	6.11	6.5
rion Pictures	02	2	6	NM	0.00	0.00	22.5	−82	8	24	98.4	−3.03	−1.35	NA	0.00	NM
aramount Communications	10	38	32	32	0.70	1.84	117.8	−7	49	422	68.0	2.16	1.20	0.65	2.03	6.9
HOTEL & MOTEL																
GROUP AVERAGE		**21**	**11**	**26**	**0.19**	**0.61**	**44.1**	**68**	**51**	**142**	**126.4**	**−0.35**	**1.23**	**1.90**	**1.60**	**13.0**
ztar	12	6	8	65	0.00	0.00	37.8	114	69	70	184.9	−0.42	0.09	NA	0.35	28.6
ally Mfg.	12	4	11	41	0.00	0.00	36.0	125	11	81	119.8	−10.57	0.10	0.13	0.17	17.6
aesars World	07	29	13	14	0.00	0.00	24.0	97	70	122	166.2	1.52	2.09*	2.43	2.44	6.1
rcus Circus Enterprises	01	32	5	17	0.00	0.00	56.7	19	64	216	119.8	1.39	1.88	2.52	2.28	2.6
ilton Hotels	12	39	20	22	1.20	3.07	47.5	5	29	222	86.4	2.34	1.77	2.02	2.34	9.8
arriott	12	15	5	18	0.28	1.82	95.2	49	34	198	83.7	0.46	0.87	0.63	1.16	13.8
irage Resorts	12	23	13	12	0.00	0.00	21.9	63	41	68	154.2	1.57	1.98	3.67	2.56	19.9
romus	12	21	11	19	0.00	0.00	33.8	75	69	156	96.1	0.90	1.08	NA	1.52	5.3
OTHER LEISURE																
GROUP AVERAGE		**26**	**15**	**19**	**0.51**	**1.91**	**65.9**	**46**	**65**	**214**	**91.2**	**1.33**	**1.17**	**2.39**	**2.32**	**13.5**
merican Greetings	02	34	23	12	0.78	2.29	35.7	15	74	239	130.8	2.61	2.84	3.16	3.17	1.9
runswick	12	12	9	61	0.44	3.79	88.6	30	61	223	78.3	0.80	0.19	0.25	0.98	36.7
arnival Cruise Lines	11	23	9	14	0.52	2.25	140.6	71	20	156	33.9	1.53	1.64	1.92	1.98	5.1
astman Kodak	12	47	20	13	2.00	4.29	324.7	12	54	748	64.0	2.17	3.56	3.44	4.34	4.6
eetwood Enterprises	04	31	20	15	0.88	2.82	22.7	48	66	178	80.2	1.37	2.03	1.92	2.71	9.2
ibson Greetings	12	23	17	9	0.36	1.57	15.9	−7	82	141	145.1	2.51	2.55	3.30	2.81	5.3
arley-Davidson	12	39	13	18	0.00	0.00	17.8	102	79	140	182.5	2.15	2.19	3.82	3.39	7.4
arman International Industries	06	8	9	NM	0.00	0.00	8.8	5	46	36	30.8	1.61	−2.26*	NA	0.80	21.3
asbro	12	36	16	17	0.24	0.68	57.1	130	70	235	69.4	1.54	2.07	1.95	2.59	10.8
uffy	12	18	10	12	0.30	1.69	12.7	76	60	85	75.7	1.37	1.43	1.87	1.63	5.5
attel	12	29	6	16	0.16	0.56	63.3	84	63	243	112.4	1.44	1.83	2.84	2.10	4.8
utboard Marine	09	16	25	NM	0.40	2.44	19.4	21	71	146	103.8	−3.98	−4.42*	NA	1.12	57.1
olaroid	12	25	16	16	0.60	2.41	50.1	6	68	217	78.0	2.20	1.51	1.84	2.48	6.0
MANUFACTURING																
INDUSTRY AVERAGE		**30**	**16**	**24**	**0.68**	**2.25**	**38.6**	**33**	**54**	**188**	**66.2**	**1.60**	**1.49**	**2.58**	**2.18**	**16.2**
GENERAL MANUFACTURING																
GROUP AVERAGE		**33**	**14**	**20**	**0.69**	**2.06**	**51.5**	**36**	**50**	**208**	**50.5**	**1.76**	**1.94**	**2.60**	**2.28**	**10.6**
lliant Techsystems	03	22	16	5	0.00	0.00	9.5	65	65	119	176.2	2.55	4.44	NA	4.66	7.9
very Dennison	12	21	13	20	0.80	3.76	62.0	NA	61	262	43.5	0.10	1.09	0.43	1.45	9.7
arlisle	12	38	27	18	1.28	3.41	7.6	27	44	65	29.3	2.86	2.13	2.73	3.13	5.8
orning	12	76	21	23	1.00	1.32	96.0	77	54	440	37.6	3.07	3.25	3.90	3.78	4.0
rane	12	21	11	14	0.75	3.61	31.5	5	47	192	44.8	1.94(b)	1.50	1.93	1.93	3.1
uracell International	06	28	7	56	0.00	0.00	106.0	NA	27	153	NA	0.08	0.50*	NA	1.32	9.1
airchild	06	5	8	4	0.00(c)	0.00	16.9	−21	19	28	36.9	−0.30	1.31*	2.70	−1.15	NM
rst Brands	06	26	11	12	0.04	0.16	21.6	27	52	107	88.0	2.40	2.21*	3.95	2.61	11.1
arsco	12	29	18	11	1.20	4.12	26.3	12	49	118	46.4	2.77	2.58	1.85	3.10	14.2
illenbrand Industries	11	60	13	25	0.58	0.97	36.3	55	40	135	10.7	2.05	2.34	2.69	2.72	4.0
inois Tool Works	12	62	21	19	0.88	1.43	55.4	29	71	314	30.4	3.35	3.32	4.41	3.81	2.9
stens	06	29	7	18	0.84	2.90	40.9	−11	65	259	45.6	1.51	1.58*	1.84	1.77	2.3
ancaster Colony	06	34	12	18	0.80	2.39	11.5	99	47	59	72.8	1.36	1.84*	3.30	2.24	8.5

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVIDEND RATE	YIELD %	SHRS. OUT. MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
Mark IV Industries	02	16	13	10	0.12	0.74	20.5	177	30	52	63.5	1.71	1.67	2.34	2.23	13.5
Minnesota Mining & Mfg.	12	87	28	16	3.12	3.60	219.3	1	65	860	43.0	5.91	5.28	6.77	5.91	2.5
Newell	12	40	9	22	0.60	1.51	62.0	67	56	293	44.0	1.67	1.80	2.67	2.11	2.4
Parker Hannifin	06	29	20	24	0.92	3.13	48.2	23	67	248	44.5	2.26	1.23*	1.58	1.77	7.9
Rubbermaid	12	30	5	29	0.34	1.14	160.2	42	23	372	27.9	0.90	1.02	1.21	1.17	1.7
Tredegar Industries	12	9	14	16	0.24	2.56	10.9	27	41	43	24.4	−2.19	0.59	NA	1.08	46.3
Trinova	12	16	19	44	0.68	4.15	28.2	−10	67	197	61.0	1.51	0.37	0.61	1.05	34.3
Valmont Industries	12	11	10	17	0.26	2.31	11.3	-3	28	43	38.7	1.34	0.67	1.83	1.20	21.7
(b) MACHINE & HAND TOOLS																
GROUP AVERAGE		**22**	**16**	**22**	**0.58**	**2.71**	**30.8**	**6**	**54**	**159**	**60.9**	**1.69**	**0.52**	**2.48**	**1.65**	**29.3**
Black & Decker	12	15	14	21	0.40	2.67	61.8	61	56	218	127.0	0.84	0.71	0.81	1.33	12.0
Cincinnati Milacron	12	8	9	35	0.36	4.65	27.4	−29	63	140	51.7	−0.87	0.22	0.22	0.61	18.0
Clark Equipment	12	23	28	NM	0.00	0.00	17.3	−11	66	136	73.5	2.87	−4.15	NA	0.71	131.0
Danaher	12	19	11	24	0.00	0.00	28.3	16	31	74	37.4	1.34	0.76	1.59	1.67	17.4
Kennametal	06	29	23	15	1.16	3.98	10.7	−2	63	122	66.2	3.08	2.00*	8.99	2.51	26.3
Snap-on Tools	12	30	16	16	1.08	3.57	42.1	-3	66	239	44.7	2.45	1.90	2.48	2.39	5.4
SPX	12	12	14	30	0.40	3.48	13.8	−22	51	110	54.8	1.28	0.38	0.50	1.14	17.5
Stanley Works	12	37	15	16	1.24	3.36	45.3	40	38	229	32.1	2.53	2.34	2.76	2.83	6.7
(c) SPECIAL MACHINERY																
GROUP AVERAGE		**35**	**19**	**32**	**0.84**	**2.31**	**35.9**	**20**	**64**	**233**	**89.7**	**2.19**	**1.69**	**3.60**	**2.59**	**16.9**
Applied Materials	10	27	19	18	0.00	0.00	16.9	27	79	132	290.2	2.00	1.52*	9.83	1.99	15.6
Briggs & Stratton	06	42	19	17	1.60	3.84	14.5	59	72	190	67.8	2.45	2.52*	2.55	3.09	14.9
Caterpillar	12	41	44	NM	1.20	2.91	100.9	−12	66	476	68.3	2.07	−1.64	NA	2.01	37.3
Deere	10	48	39	NM	2.00	4.13	76.2	3	77	482	91.1	5.42	−0.27*	NA	3.09	15.9
Dover	12	35	14	16	0.84	2.40	59.9	−12	58	298	37.8	2.55	2.18	3.00	2.54	5.5
FMC	12	46	6	10	0.00	0.00	35.1	46	62	226	37.4	4.30	4.72	6.21	5.05	5.3
General Signal	12	50	25	15	1.80	3.64	19.2	31	74	206	59.4	−0.69	3.32	3.38	4.01	4.7
Goulds Pumps	12	19	10	13	0.80	4.21	20.8	0	63	116	114.1	1.49	1.50	1.78	1.68	6.0
Harnischfeger Industries	10	18	19	8	0.40	2.27	30.8	2	72	191	71.0	2.18	2.08*	2.30	1.91	8.4
Ingersoll-Rand	12	45	30	17	1.32	2.93	51.8	21	61	364	62.2	3.55	2.70	3.94	3.66	6.6
Interlake	12	5	−23	NM	0.00	0.00	10.5	48	29	83	31.1	−1.22	−1.00	NA	0.30	93.3
Pentair	12	37	21	14	0.92	2.52	10.4	49	66	84	115.1	2.43(b)	2.69	3.32	2.99	9.0
Stewart & Stevenson Services	01	58	13	24	0.32	0.55	15.0	46	61	162	181.9	1.97	2.37	3.18	2.91	4.1
Timken	12	24	35	219	1.00	4.15	29.6	15	55	199	41.9	1.85	0.11	0.35	1.47	19.0
Tyco Laboratories	06	31	19	12	0.36	1.15	47.1	−27	59	279	76.6	2.51	2.57*	3.43	2.22	8.6
(d) TEXTILES																
GROUP AVERAGE		**19**	**17**	**24**	**0.45**	**2.17**	**17.6**	**78**	**44**	**82**	**67.0**	**−0.03**	**0.93**	**1.12**	**1.64**	**15.7**
Albany International	12	17	9	40	0.35	2.11	25.5	61	44	89	29.6	0.30	0.42	0.45	1.17	14.5
Delta Woodside Industries	06	20	9	16	0.30	1.51	21.1	346	31	72	71.9	0.32	1.27*	0.65	2.06	2.4
Dixie Yarns	12	8	19	23	0.20	2.42	8.7	−24	44	42	36.1	0.71(b)	0.36	0.32	0.41	56.1
Fieldcrest Cannon	12	12	23	33	0.00	0.00	10.4	87	37	47	150.5	−3.64	0.37	0.40	1.10	10.0
Guilford Mills	06	29	20	19	0.80	2.74	9.0	72	43	54	31.6	−0.85	1.53*	1.83	2.33	6.9
Interface	12	9	10	16	0.24	2.74	17.2	−10	70	75	101.0	1.24(b)	0.56	0.93	0.95	16.8
Shaw Industries	06	30	11	26	0.50	1.69	31.0	68	43	122	81.9	2.11	1.15*	2.02	2.20	5.0
Springs Industries	12	29	32	16	1.20	4.19	17.6	27	42	151	33.6	−0.39	1.75	2.35	2.91	13.7
16 METALS & MINING																
INDUSTRY AVERAGE		**28**	**23**	**18**	**0.73**	**2.26**	**45.3**	**5**	**56**	**182**	**60.9**	**2.54**	**1.03**	**4.21**	**2.15**	**47.6**
(a) ALUMINUM																
GROUP AVERAGE		**34**	**36**	**19**	**1.11**	**2.86**	**72.1**	**−8**	**57**	**309**	**73.9**	**3.82**	**2.28**	**4.25**	**2.88**	**32.3**
Aluminum Co. of America	12	59	60	15	1.78(c)	3.04	85.1	2	75	536	77.3	3.40	3.85	5.78	4.83	27.1
Amax	12	19	25	40	0.80(c)	4.27	86.6	−11	74	311	66.0	2.58	0.47	1.02	1.18	48.3
Kaiser Aluminum	12	10	9	5	0.05	0.49	57.3	NA	2	8	NA	4.27	1.89	NA	1.37	28.5
Reynolds Metals	12	49	50	17	1.80	3.65	59.4	−13	79	382	78.6	5.01	2.92	5.95	4.15	25.3
(b) STEEL																
GROUP AVERAGE		**24**	**20**	**16**	**0.58**	**2.02**	**32.5**	**10**	**56**	**124**	**57.5**	**1.69**	**−0.01**	**3.74**	**1.77**	**51.6**
Allegheny Ludlum	12	21	11	17	0.88	4.12	32.9	−9	45	95	26.6	2.07	1.25	1.71	2.16	16.7
Armco	12	5	8	NM	0.00	0.00	88.5	−12	55	177	50.4	−0.71	−1.35	NA	0.35	128.6
Bethlehem Steel	12	11	13	NM	0.40	3.56	76.2	−23	71	206	92.4	−6.45	−2.44	NA	1.10	120.9
Carpenter Technology	06	48	37	14	2.40	5.03	8.5	7	65	97	33.2	5.05	3.52*	7.60	3.71	23.5
Commercial Metals	08	18	19	16	0.52	2.85	10.6	13	40	45	22.9	2.27	1.12*	2.03	1.30	20.0
Geneva Steel	08	18	10	15	0.00	0.00	15.0	64	57	56	83.6	3.18	1.19	NA	2.28	11.0
Inland Steel Industries	12	19	41	NM	0.00	0.00	31.0	−23	80	167	66.8	−1.41	−4.41	NA	0.49	244.9
Lone Star Technologies	12	4	8	5	0.00	0.00	20.3	28	66	49	100.9	2.25	0.73	NA	1.01	15.8
Lukens	12	39	26	9	1.48	3.79	8.4	1	64	114	72.5	5.07	4.14	7.68	4.87	12.1
Nucor	12	83	32	30	0.52	0.63	21.6	34	70	230	50.2	3.50	2.79	3.46	3.76	8.2
Quanex	10	21	13	20	0.48	2.31	11.7	63	68	93	72.1	2.03	1.02*	2.75	1.71	18.7
USX–U. S. Steel Group	12	26	36	NM	1.00	3.92	51.0	NA	51	211	NA	6.00	−4.98	NA	3.01	44.9
Weirton Steel	12	4	13	NM	0.00	0.00	20.2	−44	18	22	11.5	0.01	−3.67	NA	−2.27	48.5
Worthington Industries	05	20	6	20	0.43	2.13	59.3	31	42	169	64.1	0.75	1.00	0.99	1.23	8.1

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
IER METALS																
OUP AVERAGE		**30**	**21**	**18**	**0.80**	**2.38**	**54.3**	**2**	**55**	**226**	**61.6**	**3.40**	**2.23**	**4.61**	**2.46**	**48.4**
rco	12	22	36	17	1.60	7.40	41.2	−20	54	213	53.2	3.60	1.31	1.44	1.99	58.8
rus Minerals	12	20	29	10	0.80	3.95	39.0	10	67	221	70.8	2.38	2.06	5.58	1.90	51.6
mestake Mining	12	16	7	33	0.20	1.23	99.4	−15	36	266	75.3	−0.19	0.50	0.40	0.13	146.2
gma Copper	12	6	19	6	0.00	0.00	29.7	29	52	71	59.1	2.51	1.00	1.65	1.19	61.3
wmont Gold	12	40	7	34	0.05	0.12	104.9	-6	NA	NA	12.9	1.35	1.19	1.83	1.33	12.8
wmont Mining	12	41	2	27	0.60	1.48	67.7	−1	32	279	43.5	2.49	1.51	1.89	1.60	15.6
lps Dodge	12	68	52	8	3.00	4.44	34.7	20	75	387	121.8	13.12	8.12	21.90	8.80	29.1
cision Castparts	03	31	16	14	0.12	0.39	17.7	−6	66	142	55.8	1.92	2.17	2.20	2.71	11.4
ONBANK FINANCIAL																
USTRY AVERAGE		**151**	**102**	**14**	**0.98**	**2.86**	**61.8**	**40**	**53**	**207**	**61.4**	**7.23**	**7.04**	**11.96**	**8.31**	**29.6**
ANCIAL SERVICES																
OUP AVERAGE		**375**	**237**	**13**	**0.84**	**2.31**	**82.9**	**59**	**55**	**258**	**63.2**	**16.71**	**15.35**	**24.34**	**17.13**	**10.9**
xander & Alexander	12	20	9	18	1.00	5.13	40.8	−15	66	173	45.4	1.35	1.07	1.09	1.27	16.5
ghany	12	98	108	14	0.00(d)	0.00	6.4	18	52	70	11.7	10.43	6.92	7.16	8.32	5.5
erican Express	12	19	15	12	1.00	5.26	470.4	−7	63	719	81.9	0.69	1.57	1.13	2.44	11.1
r Stearns	06	14	9	11	0.57(d)	3.98	103.6	55	48	174	73.3	1.00	1.30*	1.15	1.90	9.5
eficial	12	57	43	10	2.60	4.54	25.9	53	70	254	52.2	5.61	5.83	6.57	6.56	3.2
kshire Hathaway	12	8350	5297	28	0.00	0.00	1.1	25	8	123	5.0	344.00	295.00	494.62	327.50	5.4
ck (H&R)	04	34	5	22	0.88	2.56	106.8	60	72	381	41.1	1.31	1.53	1.78	1.77	3.4
ad	09	15	12	12	0.20	1.30	31.4	180	49	76	81.5	1.02	1.32*	0.91	2.29	20.5
vards (A. G.)	02	29	12	12	0.56	1.91	34.7	118	57	147	57.0	1.71	2.50	2.34	2.95	2.4
ifax	12	14	5	15	0.52	3.65	82.0	−12	62	249	68.4	0.79	0.92	0.95	1.11	8.1
eral Home Loan Mortgage	12	94	41	10	2.00	2.13	60.0	93	72	327	82.4	6.90	9.16	NA	10.44	3.8
eral Natl. Mortgage Assn.	12	56	19	11	1.20	2.14	272.9	80	87	787	89.3	4.50	5.01	8.46	5.72	1.6
t American Financial	12	11	14	17	0.40	3.72	9.9	50	14	24	12.4	0.33	0.63	0.30	0.85	15.3
t Financial Management	12	41	31	14	0.10	0.24	27.6	69	50	208	119.6	2.68	2.93	4.75	3.43	3.8
cadia National	12	37	26	11	0.00	0.00	11.5	62	18	26	9.9	5.35	3.29	6.21	4.54	45.4
ws	12	107	78	10	1.00	0.94	69.0	7	49	384	30.8	11.01	10.58	13.50	11.80	6.8
rsh & McLennan	12	72	15	17	2.60	3.62	73.0	−8	67	434	36.8	4.15	4.17	4.49	4.53	7.7
rrill Lynch	12	48	36	9	1.00	2.08	103.3	139	53	304	129.7	1.59	5.60	3.10	5.46	12.5
rgan Stanley Group	12	53	28	10	0.84	1.58	73.4	98	37	169	50.4	3.38	5.40	5.87	5.22	8.6
neWebber Group	12	18	16	7	0.35	1.97	40.1	108	58	98	114.6	−2.15	2.35	1.31	2.27	17.3
nerica	12	33	29	8	0.50	1.53	107.8	42	73	328	64.0	3.27	4.09	5.93	4.36	6.9
omon	12	28	28	5	0.64	2.33	112.5	15	59	344	141.6	2.08	5.11	4.00	4.19	23.4
wab (Charles)	12	22	5	19	0.16	0.73	38.4	202	22	67	57.8	0.41	1.18	0.84	1.44	23.6
dent Loan Marketing Assn.	12	62	10	18	0.80	1.29	93.2	33	76	334	81.8	2.96	3.53	4.52	4.10	1.2
nsamerica	12	38	38	14	2.00	5.21	76.9	18	64	259	40.8	3.29	2.82	3.07	3.72	8.1
URANCE																
OUP AVERAGE		**44**	**36**	**15**	**1.23**	**3.43**	**51.1**	**35**	**51**	**191**	**53.7**	**3.42**	**3.90**	**5.10**	**4.37**	**32.2**
na Life & Casualty	12	38	66	7	2.76	7.36	110.1	−4	73	427	67.6	5.52	5.40	5.09	5.52	8.0
erican Family	12	27	11	15	0.40	1.50	81.6	40	45	163	45.2	1.44	1.78	1.75	2.08	2.4
erican General	12	41	39	10	2.00	4.88	108.8	30	70	377	42.5	4.69	4.19	4.35	4.58	2.4
erican International Group	12	86	50	12	0.50	0.58	212.3	12	51	685	35.9	6.92	6.97	9.24	7.82	3.3
erican National Insurance	12	37	61	10	1.72	4.71	26.5	28	17	48	13.5	3.96	3.84	4.23	4.09	4.4
n	12	37	25	10	1.60	4.34	63.1	3	53	197	22.6	3.61	3.71	4.11	4.08	2.7
onaut Group	12	25	21	8	0.68	2.75	26.7	16	24	64	15.9	3.25	3.07	5.99	3.42	8.5
ital Holding	12	49	35	9	1.20	2.44	44.7	26	68	286	55.4	3.39	5.73	5.93	6.40	1.9
bb	12	66	39	11	1.48	2.25	86.9	29	72	465	59.8	6.07	5.89	7.49	6.44	3.9
na	12	52	76	10	3.04	5.83	71.6	28	92	372	51.5	4.20	5.18	4.29	5.53	8.7
A Financial	12	90	76	16	0.00	0.00	61.8	31	NA	NA	7.8	5.77	5.46	7.14	5.54	12.8
seco	12	58	16	13	0.16	0.28	9.8	291	67	64	337.3	2.72(b)	4.36	6.93	5.41	17.0
ntinental Corp.	12	25	39	168	2.60	10.30	54.6	2	NA	NA	55.2	2.53	0.15	0.31	0.11	818.2
itable of Iowa	12	33	43	6	1.28	3.88	7.1	94	27	34	31.6	3.35	5.84	6.93	6.46	10.4
co	12	189	77	16	2.28	1.20	14.2	12	78	111	8.0	13.64	12.13	16.23	13.69	3.7
neral Re	12	89	41	14	1.68	1.88	86.9	−4	83	571	49.7	6.89	6.31	8.99	7.04	3.7
rtford Steam Boiler	12	50	19	19	2.00	3.98	21.0	4	46	171	22.7	3.80	2.69	3.82	2.93	9.9
	12	3	1	4	0.00	0.00	48.2	−8	7	36	35.0	−0.88	0.78	0.52	0.88	11.4
ependent Insurance Group	12	18	27	8	0.88	4.89	13.2	16	14	28	11.3	2.34	2.22	2.39	2.48	8.5
ferson-Pilot	12	55	44	13	1.68	3.07	34.2	47	47	211	38.1	4.41	4.31	5.00	4.54	5.5
mper	12	36	37	8	0.92	2.57	48.3	53	51	114	46.2	0.25	4.23	1.39	4.67	6.9
coln National	12	52	57	12	2.72	5.24	41.6	21	67	249	32.1	4.29	4.49	4.63	4.94	9.3
VNL	12	29	41	5	1.40	4.83	11.9	67	44	81	174.4	4.90	5.62	6.01	5.64	11.3
l Republic International	12	35	35	8	0.74(d)	2.15	23.3	67	61	100	26.4	4.03	4.58	5.53	5.06	12.3
on Capital	12	33	28	8	0.92	2.81	6.3	86	68	49	67.9	2.79	4.34	3.93	4.71	16.6
neer Financial Services	12	7	11	10	0.00	0.00	6.6	10	27	24	129.6	−1.72(b)	0.71	1.07	1.27	16.5
gressive	12	51	18	17	0.52	1.01	21.1	−9	61	106	43.0	3.84	3.04	3.91	4.57	16.2
vident Life & Accident	12	20	30	7	1.00	5.00	46.5	14	42	96	41.7	3.85	2.95	5.29	3.27	13.5
iance Group Holdings	12	4	6	23	0.32	7.76	74.6	−11	14	23	4.7	1.58	0.18	0.23	0.40	42.5
feco	12	43	34	12	1.48	3.48	62.7	29	63	250	70.2	4.41	3.52	4.94	4.05	8.1
Paul	12	67	53	8	2.60	3.90	42.5	7	86	329	93.5	8.57	7.94	11.23	7.93	6.8
chmark	12	53	20	11	1.60	3.05	51.1	7	49	269	28.9	4.28	4.67	5.29	5.16	3.5

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVIDEND RATE	YIELD %	SHRS OUT MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
Transatlantic Holdings	12	34	21	12	0.20	0.59	22.9	24	46	87	20.8	2.71	2.90	NA	3.25	7.1
Travelers	12	19	42	7	1.60	8.37	103.9	17	67	309	61.5	−1.85	2.88	2.87	2.79	14.7
20th Century Industries	12	19	4	9	0.42	2.21	102.8	167	15	69	23.0	1.93	2.07	3.12	2.14	12.6
Unitrin	12	35	36	15	1.00	2.86	52.1	9	36	133	38.3	2.40	2.41	NA	2.75	8.4
UNUM	12	76	41	13	1.04	1.37	33.4	64	71	240	56.5	5.38	5.70	8.83	6.44	3.6
USF&G	12	6	11	NM	0.20	3.20	84.3	−16	28	225	110.0	−5.71	−1.98	NA	0.72	95.8
USLife	12	43	63	10	1.64	3.78	15.3	54	62	174	46.4	4.27	4.57	4.72	4.82	5.8
Washington National	12	16	29	15	1.08	6.97	10.0	41	58	32	25.0	−0.84	1.03	NA	1.37	29.9
(c) SAVINGS & LOAN																
GROUP AVERAGE		**10**	**20**	**6**	**0.26**	**1.83**	**51.0**	**13**	**55**	**130**	**90.5**	**−2.17**	**−2.10**	**1.94**	**1.29**	**70.2**
Ahmanson (H. F.)	12	14	23	7	0.88	6.34	116.0	3	87	284	57.2	1.64	2.09	1.59	2.27	5.3
CalFed	12	2	43	NM	0.00	0.00	25.6	−57	44	55	133.6	−8.77	−1.06	NA	0.64	71.9
Coast Savings Financial	12	5	17	2	0.00	0.00	16.0	138	49	37	105.9	−4.14	2.19	2.02	1.50	30.0
Dime Savings Bank of N. Y.	12	4	20	NM	0.00	0.00	23.1	48	47	52	72.3	−5.94	−1.74	NA	0.09	344.4
Glenfed	06	4	25	NM	0.00	0.00	34.2	−45	31	48	103.9	3.56(b)	−6.79*	NA	1.64	13.4
Golden West Financial	12	34	22	9	0.22	0.64	63.5	40	61	263	55.6	2.87	3.69	3.26	4.02	3.0
Great Western Financial	12	14	16	6	0.88	6.34	128.6	13	82	307	68.5	1.50	2.25	1.34	2.37	6.3
HomeFed	12	0	2	NM	0.00	0.00	21.5	−91	22	38	156.1	−11.57	−21.50	NA	−3.20	151.9
Standard Federal Bank	12	13	16	7	0.40	3.14	30.9	66	71	90	61.6	1.30	1.94	1.48	2.25	5.3
18 **OFFICE EQUIPMENT & COMPUTERS**																
INDUSTRY AVERAGE		**28**	**15**	**17**	**0.34**	**0.82**	**81.2**	**36**	**54**	**240**	**194.6**	**1.50**	**1.33**	**2.34**	**2.15**	**37.4**
(a) BUSINESS MACHINES & SERVICES																
GROUP AVERAGE		**21**	**10**	**15**	**0.45**	**1.70**	**32.9**	**56**	**53**	**130**	**133.6**	**1.28**	**1.43**	**1.71**	**1.76**	**10.2**
Anacomp	09	3	−1	8	0.00	0.00	38.4	96	24	49	102.7	0.09	0.42*	0.26	0.50	16.0
Deluxe	12	37	9	17	1.28	3.44	84.0	6	57	373	32.7	2.03	2.21	2.36	2.52	3.2
Egghead	03	17	7	20	0.00	0.00	16.7	69	50	57	232.9	0.92	0.85	NA	1.05	20.0
HON Industries	12	18	4	20	0.36	2.00	32.4	24	26	49	18.1	1.30	0.91	1.16	1.15	4.3
Intelligent Electronics	10	24	15	11	0.00	0.00	18.0	54	52	115	526.1	2.09	2.21*	4.78	2.65	9.8
Merisel	12	8	5	22	0.00	0.00	24.3	248	44	41	117.0	0.03	0.38	0.10	0.62	6.5
MicroAge	09	8	8	11	0.00	0.00	4.2	−15	46	24	205.0	1.46	0.75*	1.13	1.22	18.9
Miller (Herman)	05	15	12	13	0.52	3.41	25.1	−12	59	92	91.1	0.55	1.18	0.86	1.78	18.5
Pitney Bowes	12	58	22	16	1.36	2.34	79.3	47	75	459	42.7	2.60	3.64	3.41	4.11	2.2
Reynolds & Reynolds	09	31	23	14	0.84	2.74	10.5	89	77	100	55.2	2.30	2.13*	2.21	2.57	3.9
Standard Register	12	12	11	12	0.56	4.72	28.7	15	73	70	45.9	0.74	1.02	0.87	1.17	8.5
(b) COMPUTERS & PERIPHERALS																
GROUP AVERAGE		**26**	**18**	**15**	**0.37**	**0.58**	**93.7**	**20**	**54**	**270**	**229.7**	**1.60**	**1.10**	**2.69**	**2.27**	**61.6**
Amdahl	12	13	12	38	0.10	0.80	110.8	−11	46	191	61.4	1.66	0.33	0.90	1.33	24.1
Apple Computer	09	51	14	20	0.48	0.95	117.5	21	70	490	417.2	3.77	2.58*	4.65	4.10	9.3
AST Research	06	16	10	8	0.00	0.00	30.2	−7	54	132	739.6	1.43	2.13*	2.03	2.29	6.6
Commodore International	06	13	9	7	0.00	0.00	32.7	11	32	80	237.3	0.05	1.73*	0.42	2.15	5.6
Compaq Computer	12	24	22	11	0.00	0.00	85.1	−58	49	405	297.8	5.14	2.27	5.82	2.80	16.4
Conner Peripherals	12	13	12	8	0.00	0.00	57.6	−44	42	169	261.0	2.51	1.61	3.49	1.88	20.7
Control Data	12	9	10	18	0.00	0.00	42.5	3	75	154	56.0	0.05	0.51	0.16	0.94	24.5
Cray Research	12	47	25	11	0.00	0.00	26.4	56	79	211	95.0	4.02	4.08	3.75	4.52	6.4
Data General	09	14	16	5	0.00	0.00	31.5	225	64	148	248.7	−4.65	2.62*	NA	2.02	23.8
Dell Computer	01	24	10	12	0.00	0.00	23.5	55	36	88	635.9	1.36	2.02	1.84	2.34	6.8
Digital Equipment	06	63	61	NM	0.00	0.00	125.1	18	67	599	119.9	0.59	−5.08*	NA	3.82	19.1
Dynatech	03	18	16	12	0.00	0.00	9.4	−9	52	59	108.1	1.64	1.46	1.30	1.90	NM
Hewlett-Packard	10	48	29	16	0.50	1.04	251.5	56	52	710	66.4	3.06	3.02*	3.74	4.01	5.2
International Business Machines	12	93	67	22	4.84	5.23	571.6	−18	49	1245	68.7	10.51	4.20	5.62	8.22	12.7
Maxtor	03	5	5	NM	0.00	0.00	23.4	−1	23	40	310.6	−1.89	−1.10	NA	0.33	175.8
Quantum	03	9	7	11	0.00	0.00	40.7	−23	53	120	509.0	1.69	0.82	2.09	1.33	33.8
Seagate Technology	06	9	11	9	0.00	0.00	65.1	−23	45	132	447.9	1.92	0.95*	0.38	0.16	381.3
Silicon Graphics	06	46	17	31	0.00	0.00	20.7	95	78	147	193.1	1.69	1.45*	3.49	1.99	8.5
Storage Technology	12	40	20	15	0.00	0.00	36.9	107	86	159	182.0	2.22	2.58	1.90	3.40	4.1
Sun Microsystems	06	24	13	13	0.00	0.00	96.4	10	65	266	374.7	1.21	1.85*	2.68	2.03	10.8
Tandem Computers	09	10	12	30	0.00	0.00	107.4	−14	67	274	96.1	1.13	0.33*	0.58	0.76	34.2
Tandy	06	26	22	10	0.60	2.29	78.4	−10	58	298	56.0	3.54	2.58*	3.50	3.09	7.4
Unisys	12	4	2	NM	0.00	0.00	161.7	50	20	211	104.9	−3.45	−2.24	NA	0.30	273.3
Wang Laboratories	06	3	0	NM	0.00	0.00	167.9	−4	25	130	36.9	−3.82	−2.26*	NA	0.07	385.7
Western Digital	06	2	6	NM	0.00	0.00	29.2	−51	30	53	169.2	0.82	−4.59*	NA	−2.41	36.5
Xerox	12	62	47	13	3.00	4.84	92.5	75	78	506	79.0	5.51	4.83	5.50	5.68	8.5
1 COMPUTER SOFTWARE & SERVICES																
GROUP AVERAGE		**38**	**13**	**22**	**0.14**	**0.47**	**102.0**	**55**	**57**	**284**	**170.3**	**1.45**	**1.82**	**2.28**	**2.25**	**6.5**
Automatic Data Processing	06	37	8	23	0.40	1.08	138.2	38	67	471	38.9	1.44	1.63*	1.99	1.82	1.6
Comdisco	09	20	17	10	0.28	1.37	38.6	11	50	107	46.9	2.09	2.13*	2.35	2.52	5.2
Computer Associates Intl.	03	9	6	10	0.10	1.07	177.1	18	48	278	84.0	0.86	0.92	1.25	1.05	10.5
Computer Sciences	03	64	34	15	0.00	0.00	16.2	33	74	223	111.8	4.02	4.19	5.36	4.98	3.4
Electronic Data Systems	12	53	24	23	0.64	1.21	103.7	42	48	320	37.8	2.08	2.35	2.83	2.66	1.9
Intergraph	12	17	15	11	0.00	0.00	47.4	25	60	194	234.4	1.28	1.51	1.52	1.73	8.8
Lotus Development	12	20	8	14	0.00	0.00	43.3	3	90	250	484.2	0.54	1.47	1.04	2.21	7.2

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INVESTMENT OUTLOOK SCOREBOARD

OMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVI-DEND RATE	YIELD %	SHRS. OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURN-OVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CON-SENSUS	1992 ESTIMATES FROM ANALYSTS VARIA-TION %
icrosoft	06	97	9	39	0.00	0.00	175.1	97	31	428	194.4	1.56	2.47*	3.87	3.45	4.6
ovell	10	50	4	46	0.00	0.00	143.6	206	71	369	239.0	0.68	1.08	1.59	1.45	5.5
racle Systems	05	14	3	30	0.00	0.00	136.9	76	31	204	232.0	−0.09	0.45	1.01	0.65	16.9
APER & FOREST PRODUCTS																
DUSTRY AVERAGE		**37**	**29**	**56**	**1.23**	**3.61**	**62.5**	**12**	**59**	**289**	**56.3**	**2.83**	**1.55**	**2.71**	**2.58**	**26.0**
OREST PRODUCTS																
ROUP AVERAGE		**30**	**27**	**30**	**1.23**	**4.76**	**63.2**	**11**	**54**	**237**	**68.7**	**2.53**	**0.22**	**2.00**	**1.94**	**50.8**
oise Cascade	12	22	31	NM	1.52	7.03	37.9	−17	61	235	76.6	1.62	−3.61	NA	0.63	138.1
uisiana-Pacific	12	38	31	24	1.08	2.86	39.0	50	46	243	76.3	2.46	1.60	2.49	3.04	16.4
ope & Talbot	12	13	18	43	0.76	5.74	11.6	−10	49	65	67.4	1.61(b)	0.31	0.69	0.65	69.2
eyerhaeuser	12	24	19	24	1.20	5.11	201.9	8	56	485	52.2	1.87	0.99	1.34	1.66	16.3
illamette Industries	12	52	39	29	1.60	3.06	25.5	22	57	159	71.2	5.10	1.80	3.47	3.72	13.7
APER																
ROUP AVERAGE		**40**	**29**	**64**	**1.24**	**3.20**	**62.2**	**12**	**61**	**307**	**51.8**	**2.94**	**2.03**	**2.91**	**2.81**	**17.1**
owater	12	20	27	17	1.20	5.89	35.9	−3	68	159	66.9	2.30	1.23	2.11	1.10	43.6
ampion International	12	24	40	588	0.20(c)	0.85	92.9	−8	70	331	66.3	2.08(b)	0.04	0.18	0.99	39.4
esapeake	12	20	15	25	0.72	3.62	20.6	47	48	72	20.8	0.81	0.79	1.11	1.41	20.6
nsolidated Papers	12	36	22	17	1.28	3.56	43.7	−6	23	122	20.9	3.27	2.11	3.17	2.37	11.8
eorgia-Pacific	12	48	33	81	1.60	3.37	87.4	29	64	466	78.1	4.28	0.59	1.56	2.37	19.0
atfelter (P. H.)	12	52	20	16	1.20	2.32	22.5	18	71	111	13.0	3.76	3.29	4.84	3.74	2.7
ternational Paper	12	67	52	16	1.68	2.52	110.3	25	66	606	92.4	5.21	4.18	6.46	5.44	6.4
mes River Corp. of Virginia	12	19	27	21	0.60	3.14	81.4	−27	79	278	61.6	0.66	0.89	0.73	1.50	25.3
mberly-Clark	12	93	30	15	2.96	3.20	80.0	10	68	575	45.6	5.40	6.12	7.44	6.67	3.6
ead	12	30	26	24	1.00	3.29	58.3	18	65	277	56.8	1.71	1.29	1.65	2.16	13.4
tlatch	12	34	31	16	1.40	4.07	29.0	19	43	208	53.7	3.41	2.21	3.18	3.29	11.6
ott Paper	12	33	29	20	0.80	2.43	73.7	−13	70	394	59.3	2.01	1.64	2.12	2.64	19.3
nion Camp	12	46	28	24	1.56	3.43	69.4	31	71	436	60.8	3.35	1.92	3.19	2.95	10.8
estvaco	10	36	25	17	1.10	3.08	65.7	35	51	262	29.0	2.90	2.10*	3.06	2.74	12.0
UBLISHING & BROADCASTING																
DUSTRY AVERAGE		**53**	**23**	**99**	**0.77**	**1.88**	**90.1**	**10**	**48**	**236**	**39.1**	**1.85**	**1.92**	**3.85**	**2.76**	**17.3**
OADCASTING																
ROUP AVERAGE		**75**	**27**	**228**	**0.15**	**0.19**	**120.2**	**15**	**44**	**208**	**43.0**	**3.20**	**3.42**	**7.47**	**4.59**	**27.4**
nerican TV & Communications	12	54	6	36	0.00	0.00	109.1	48	NA	NA	29.7	1.10	1.47	1.96	1.85	7.0
pital Cities/ABC	12	380	216	17	0.20	0.05	16.8	−17	79	441	40.9	27.71	22.37	34.18	27.32	5.3
S	12	132	27	24	1.00	0.76	13.2	−57	78	272	90.3	3.55	5.54	5.21	9.83	14.2
mcast	12	16	0	NM	0.14(c)	0.90	117.3	22	26	204	38.9	−1.58	−1.30	NA	−1.22	28.7
ultimedia	12	20	−12	14	0.00	0.00	34.6	−11	73	128	91.2	1.32	1.41	2.41	1.72	2.3
le-Communications	12	14	1	52	0.00	0.00	354.0	1	69	384	72.2	−0.81	0.26	0.26	0.10	70.0
rner Broadcasting System	12	20	−2	116	0.00	0.00	176.1	105	4	43	2.4	−0.42	0.17	NA	0.45	66.7
ited Artists Entertainment	12	14	4	16	0.00	0.00	140.8	11	14	103	16.9	−1.27	0.85	0.81	0.63	22.2
acom	12	31	6	1550	0.00	0.00	120.2	33	7	91	4.2	−0.84	0.02	NA	0.60	30.0
UBLISHING																
ROUP AVERAGE		**41**	**20**	**29**	**1.10**	**2.77**	**74.1**	**7**	**51**	**249**	**37.0**	**1.14**	**1.08**	**2.30**	**1.74**	**11.7**
ffiliated Publications	12	9	3	86	0.24	2.78	70.3	5	45	119	34.3	0.35	0.10	0.13	0.24	29.2
mmerce Clearing House	12	18	7	21	0.70	3.94	34.8	−21	34	76	28.9	1.15	0.84	0.83	0.97	6.2
w Jones	12	23	14	24	0.76	3.29	101.1	−3	37	208	18.9	1.06	0.98	NA	1.30	9.2
un & Bradstreet	12	48	11	17	2.16	4.50	178.5	14	71	629	33.7	2.80	2.86	3.18	3.14	1.6
annett	12	37	10	18	1.24	3.32	143.7	−7	75	529	42.8	2.36	2.05	2.47	2.45	4.9
night-Ridder	12	45	19	17	1.40	3.15	50.4	−1	77	276	45.0	2.94	2.55	2.99	3.02	5.6
cGraw-Hill	12	52	19	NA	2.20	4.26	49.0	−2	60	366	44.5	3.53	††	2.34	††	††
††Because BUSINESS WEEK is owned by McGraw-Hill, the Scoreboard does not include forecasts of the company's earnings																
edia General	12	18	7	55	0.44	2.43	26.0	−3	56	73	26.0	0.98	0.33	0.46	0.80	17.5
eredith	06	25	21	18	0.64	2.56	16.7	5	52	143	37.3	−0.08	1.36*	1.24	1.24	9.7
ew York Times	12	19	14	51	0.56	2.91	77.3	−7	51	252	32.7	0.85	0.38	0.38	0.70	22.9
eaders Digest Association	06	43	6	25	0.80	1.88	119.4	44	36	271	29.1	1.48	1.74*	NA	1.95	1.5
ripps (E. W.)	12	20	9	23	0.40	1.99	74.5	18	13	62	4.1	0.63	0.87	0.89	1.07	2.8
me Warner	12	83	91	NM	1.00	1.20	92.3	55	44	422	89.2	−13.67	−9.71	NA	−4.96	32.7
mes Mirror	12	27	15	24	1.08	4.00	128.5	1	45	303	23.2	1.40	1.12	1.04	1.49	12.1
ibune	12	37	8	19	0.96	2.59	64.5	6	40	260	36.4	−1.22	1.97	2.03	2.43	8.2
ashington Post	12	182	79	20	4.20	2.31	11.9	−8	54	180	17.5	14.45	9.31	13.82	11.14	6.8
estern Publishing Group	01	13	9	24	0.00	0.00	20.9	26	68	66	85.9	0.36	0.56	0.45	0.80	16.3
ERVICE INDUSTRIES																
DUSTRY AVERAGE		**24**	**11**	**21**	**0.41**	**1.75**	**46.3**	**26**	**52**	**166**	**65.9**	**1.36**	**1.33**	**1.83**	**1.66**	**10.9**
ONSTRUCTION & ENGINEERING																
ROUP AVERAGE		**28**	**13**	**19**	**0.55**	**1.93**	**30.1**	**13**	**52**	**186**	**84.4**	**1.31**	**1.62**	**2.43**	**1.89**	**12.6**
utler Mfg.	12	12	10	12	0.00	0.00	4.6	−15	26	26	32.2	1.81	0.97	2.05	0.75	46.7
G&G	12	45	14	16	0.84	1.87	27.8	44	61	234	42.8	2.60	2.87	3.25	3.15	1.9
uor	10	37	12	20	0.32	0.86	80.9	1	64	434	107.6	1.71	1.83	2.84	2.12	9.4
ster Wheeler	12	23	14	18	0.54	2.36	35.6	3	63	216	90.8	1.08	1.25	1.82	1.54	7.8
anite Construction	12	24	13	13	0.20	0.85	11.6	8	40	76	110.8	1.70	1.77	NA	2.03	5.9

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST.	1991 DIVIDEND RATE	YIELD %	SHRS. OUT. MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
Jacobs Engineering Group	09	23	4	27	0.00	0.00	22.7	85	33	81	59.6	0.64	0.86*	1.97	1.04	2.9
McDermott International	03	17	13	34	1.00	5.97	44.1	-32	63	221	121.4	-1.97	0.50	NA	1.14	21.9
Morrison Knudsen	12	42	27	14	1.48	3.53	13.6	12	66	197	110.1	2.90	2.90	2.64	3.37	4.5
(b) **INDUSTRIAL DISTRIBUTION**																
GROUP AVERAGE		**22**	**12**	**21**	**0.37**	**2.01**	**27.8**	**47**	**54**	**118**	**54.7**	**1.29**	**1.19**	**1.79**	**1.54**	**10.8**
Arrow Electronics	12	13	12	21	0.00	0.00	12.0	208	36	41	121.2	0.44	0.63	NA	1.31	18.3
Avnet	06	25	23	15	0.60	2.40	35.5	-3	82	144	48.2	1.57	1.72*	2.46	1.69	11.2
Bearings	06	19	19	30	0.64	3.46	7.1	4	66	53	31.1	1.70	0.61*	2.03	1.26	7.1
Genuine Parts	12	43	14	16	1.45	3.37	76.3	13	62	390	37.0	2.68	2.71	3.36	2.94	2.7
Grainger (W. W.)	12	43	16	18	0.62	1.44	53.5	29	63	302	43.4	2.31	2.37	2.94	2.74	3.3
Howell	12	10	11	38	0.32	3.12	4.8	-15	27	32	12.5	1.17	0.27	0.60	1.07	29.9
Kaman	12	8	11	8	0.44	5.42	18.2	3	43	69	56.6	1.06	0.97	0.77	1.14	1.8
Marshall Industries	05	24	19	11	0.00	0.00	8.5	22	79	72	46.9	2.03	2.17	3.15	2.75	0.0
Office Depot	12	40	7	55	0.00	0.00	25.8	332	54	139	239.7	0.60	0.74	1.07	1.26	7.9
Premier Industrial	05	28	5	20	0.44	1.59	57.4	12	19	119	8.9	1.30	1.37	1.68	1.56	7.7
Sigma-Aldrich	12	43	8	26	0.22	0.52	49.7	45	54	213	46.4	1.44	1.61	2.04	1.87	1.6
TBC	12	13	4	15	0.00	0.00	19.8	53	63	66	63.9	0.79	0.87	1.27	0.97	4.1
United Stationers	08	9	12	13	0.40	4.64	15.5	-3	64	43	27.2	0.83	0.64*	0.80	0.79	10.1
Univar	02	11	9	16	0.30	2.82	19.6	3	16	32	11.7	1.10	0.67	2.38	0.87	36.8
Willcox & Gibbs	12	7	8	15	0.10	1.38	13.6	2	77	54	25.7	0.40	0.50	0.54	0.85	8.2
(c) **POLLUTION CONTROL**																
GROUP AVERAGE		**20**	**6**	**31**	**0.26**	**1.24**	**178.2**	**-12**	**37**	**339**	**62.3**	**1.02**	**0.73**	**1.08**	**1.08**	**14.2**
Air & Water Technologies	10	19	8	44	0.00	0.00	22.4	-1	55	78	41.7	0.35	0.42	NA	0.62	40.3
Browning-Ferris Industries	09	17	8	41	0.68	3.97	152.7	-23	57	478	81.6	1.68	0.42*	0.85	1.32	11.4
Chemical Waste Management	12	19	5	31	0.20	1.03	206.8	-10	16	217	41.9	0.85	0.62	0.86	0.89	7.9
ICF International	02	8	2	14	0.00	0.00	18.1	-32	8	27	91.8	0.71	0.58	0.72	0.64	7.8
Waste Management	12	37	8	23	0.44	1.20	490.9	5	50	894	54.9	1.49	1.61	1.90	1.95	3.6
(d) **PRINTING & ADVERTISING**																
GROUP AVERAGE		**35**	**13**	**17**	**0.71**	**1.95**	**33.8**	**38**	**74**	**184**	**77.5**	**2.11**	**2.11**	**2.48**	**2.48**	**3.4**
Advo-System	09	22	6	20	0.00	0.00	13.1	87	75	64	133.4	0.95	1.06*	1.22	1.27	2.4
Banta	12	26	17	12	0.60(c)	2.29	13.1	8	69	95	105.9	2.29	2.11	2.54	2.53	3.2
Donnelley (R. R.) & Sons	12	47	22	18	1.00	2.12	77.7	19	68	390	31.7	2.91	2.69	3.09	3.20	4.1
Interpublic Group	12	47	13	18	0.84	1.79	37.0	35	78	214	42.4	2.38	2.60	3.16	3.05	3.0
Omnicom Group	12	31	10	15	1.10	3.55	28.1	42	78	158	74.1	2.01	2.08	2.39	2.35	4.7
(e) **OTHER SERVICES**																
GROUP AVERAGE		**20**	**9**	**19**	**0.30**	**1.35**	**27.1**	**18**	**45**	**126**	**63.7**	**1.32**	**1.21**	**1.48**	**1.55**	**11.9**
Adia Services	12	18	10	23	0.16	0.90	18.1	29	12	38	14.8	1.41	0.76	1.24	1.34	28.4
CDI	12	7	5	31	0.00	0.00	19.7	6	28	42	14.8	0.61	0.23	0.44	0.46	39.1
Handleman	04	13	7	12	0.40	3.05	33.2	3	70	166	87.1	0.72	1.12	1.04	1.34	11.2
JWP	12	14	11	9	0.00	0.00	39.0	-7	55	199	112.9	1.56	1.55	2.23	1.76	6.3
Kelly Services	12	29	12	22	0.72	2.50	30.1	-12	31	101	24.8	2.37	1.33	2.09	1.83	8.7
Olsten	12	23	7	25	0.24	1.06	15.6	92	45	82	34.8	0.80	0.92	1.08	1.32	6.1
Pinkerton's	12	25	13	15	0.00	0.00	8.0	49	56	59	179.6	1.56	1.63	NA	2.16	6.5
Safety-Kleen	12	27	8	26	0.32	1.20	56.9	3	53	309	60.8	1.05	1.02	1.26	1.27	4.7
Service Corp. International	12	24	10	16	0.56	2.36	46.4	7	72	239	72.3	1.28	1.51	1.27	1.75	5.1
Wackenhut	12	25	10	12	0.60	2.45	3.9	8	28	28	35.4	1.80	2.00	2.64	2.29	2.6
TELECOMMUNICATIONS																
INDUSTRY AVERAGE		**35**	**18**	**32**	**1.61**	**4.03**	**286.2**	**6**	**38**	**438**	**48.2**	**2.39**	**2.08**	**2.88**	**2.43**	**11.1**
(a) **EQUIPMENT & SERVICES**																
GROUP AVERAGE		**22**	**11**	**67**	**0.55**	**2.06**	**294.8**	**18**	**39**	**344**	**94.3**	**1.68**	**0.72**	**2.82**	**1.29**	**21.8**
American Telephone & Telegraph	12	36	12	14	1.32	3.63	1304.4	44	23	837	31.6	2.51	2.63	5.83	2.97	3.7
DSC Communications	12	4	4	NM	0.00	0.00	41.7	-36	37	137	263.3	0.47	-1.05	NA	0.23	73.9
McCaw Cellular Communications	12	26	10	NM	0.00	0.00	182.1	55	39	232	72.2	1.92	-2.34	NA	-1.81	36.5
MCI Communications	12	28	10	14	0.10	0.36	257.0	43	62	555	131.4	1.06	2.02	3.36	2.39	4.6
Pacific Telecom	12	25	15	12	1.26	4.99	39.5	2	7	43	7.2	2.46	2.04	2.80	2.58	12.8
Scientific-Atlanta	06	14	12	283	0.16	1.13	22.7	14	47	130	94.9	1.90	0.05*	0.13	0.54	13.0
United Telecommunications	12	23	11	14	1.00	4.30	216.1	1	61	474	59.4	1.43	1.70	1.95	2.11	8.1
(b) **TELEPHONE COMPANIES**																
GROUP AVERAGE		**41**	**22**	**18**	**2.18**	**5.09**	**281.6**	**-1**	**37**	**489**	**23.4**	**2.78**	**2.82**	**2.91**	**3.05**	**5.4**
Alltel	12	36	13	15	1.40	3.90	79.1	5	33	243	20.8	2.35	2.38	3.07	2.63	6.1
Ameritech	12	60	30	13	3.40	5.69	266.1	-10	32	531	19.7	4.73	4.66	5.00	4.82	1.9
Bell Atlantic	12	45	24	13	2.52	5.55	394.7	-15	30	614	23.4	3.38	3.62	3.54	3.64	4.1
BellSouth	12	47	27	15	2.76	5.92	485.1	-14	26	697	16.6	3.38	3.21	3.31	3.42	3.5
Centel	12	29	13	52	0.88	3.00	84.9	-1	58	274	26.1	0.54	0.56	0.26	0.73	20.5
Cincinnati Bell	12	20	9	25	0.80	3.98	61.4	-13	29	116	18.5	1.44	0.81	1.22	1.12	8.9
GTE	12	31	12	16	1.70	5.44	886.6	42	52	848	31.2	2.26	1.96	2.24	2.20	3.6
Nynex	12	75	47	13	4.56	6.06	202.8	7	38	625	27.6	4.78	5.73	4.73	6.17	3.2
Pacific Telesis Group	12	40	19	14	2.14	5.38	400.4	-12	37	696	25.9	2.59	2.83	2.97	3.01	3.0
Rochester Telephone	12	33	19	17	1.50	4.51	29.0	14	32	148	21.7	1.72	1.95	1.98	2.10	4.8
Southern New England Telecomms.	12	30	19	13	1.76	5.79	62.5	7	31	189	19.3	2.17	2.29	2.45	2.63	2.7
Southwestern Bell	12	58	29	15	2.84	4.92	299.8	3	39	732	27.5	3.67	3.74	3.81	4.08	4.2
	12	34	24	12	2.08	6.05	408.3	-8	42	646	26.3	3.11	2.87	3.24	3.06	3.9

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVIDEND RATE	YIELD %	SHRS OUT MILS	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	EARNINGS PER SHARE 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
TRANSPORTATION																
INDUSTRY AVERAGE		**32**	**21**	**19**	**0.59**	**1.71**	**47.5**	**26**	**58**	**197**	**92.3**	**-0.85**	**0.31**	**2.57**	**2.43**	**26.7**
AIRLINES																
GROUP AVERAGE		**38**	**20**	**NM**	**0.19**	**0.44**	**39.0**	**-2**	**54**	**202**	**140.1**	**-7.84**	**-4.73**	**0.75**	**1.54**	**57.0**
Alaska Air Group	12	19	22	80	0.20	1.04	13.2	10	64	117	110.6	0.82	0.24	0.44	1.75	26.3
America West Airlines	12	1	-5	NM	0.00	0.00	23.0	-71	5	23	140.8	-4.26	-4.88	NA	-1.36	114.7
AMR	12	59	56	NM	0.00	0.00	68.3	33	79	444	170.3	-0.64	-2.63	NA	4.56	25.9
Continental Airlines Holding	12	1	-82	NM	0.00	0.00	45.9	-62	6	32	116.8	-58.96	-9.10	NA	-2.81	109.3
Delta Air Lines	06	57	50	NM	1.20	2.10	49.4	20	62	351	130.1	5.79	-7.73*	NA	0.25	1084.0
Southwest Airlines	12	29	15	41	0.10	0.35	42.2	65	84	179	98.5	1.10	0.70	1.05	1.82	20.9
UAL	12	125	78	NM	0.00	0.00	23.8	23	72	284	183.4	4.33	-5.52	NA	10.49	24.5
USAir Group	12	11	24	NM	0.00	0.00	46.2	-32	64	186	170.4	-10.89	-8.89	NA	-2.38	77.3
RAILROADS																
GROUP AVERAGE		**43**	**27**	**15**	**1.08**	**2.25**	**98.1**	**63**	**55**	**333**	**68.9**	**2.93**	**3.12**	**3.83**	**3.87**	**6.9**
Burlington Northern	12	36	11	18	1.20	3.36	76.8	25	66	352	107.2	2.89	1.96	1.75	3.33	11.1
Consolidated Rail	12	71	67	13	1.80	2.55	41.2	78	78	324	122.5	5.10	5.32	4.40	6.82	6.6
CSX	12	49	37	12	1.52	3.13	102.1	59	58	434	54.1	3.63	3.98	4.50	4.65	5.2
Illinois Central	12	28	9	12	0.00	0.00	28.3	177	40	77	82.3	1.96	2.38	NA	2.78	4.7
Kansas City Southern Industries	12	52	38	13	1.08	2.10	10.4	46	48	82	55.3	3.95	4.07	4.31	4.55	5.3
Norfolk Southern	12	56	32	16	1.60	2.88	144.4	24	60	524	35.1	3.43	3.55	4.54	4.27	6.3
Santa Fe Pacific	12	10	5	19	0.10	0.98	179.0	63	29	254	52.1	-0.62	0.55	NA	0.86	12.8
Union Pacific	12	45	20	14	1.36	3.02	202.3	29	63	613	42.6	3.09	3.17	3.47	3.69	3.5
TRANSPORTATION SERVICES																
GROUP AVERAGE		**22**	**18**	**16**	**0.44**	**1.82**	**29.5**	**20**	**64**	**141**	**73.1**	**0.98**	**1.25**	**1.87**	**2.06**	**27.8**
Air Express International	12	17	8	10	0.16	0.94	7.5	62	41	48	67.4	1.51	1.63	2.13	1.82	6.6
Airborne Freight	12	21	15	14	0.30	1.43	19.0	25	84	127	129.7	1.76	1.47	1.86	2.07	7.7
Bandag Industries	12	4	16	NM	0.00	0.00	14.4	-34	37	39	67.8	-1.71	-1.64	NA	0.22	136.4
Federal Express	05	35	32	15	0.00	0.00	53.6	4	72	271	70.4	0.11	2.30	0.47	3.31	8.8
GATX	04	30	24	10	1.20	3.97	16.9	24	71	110	43.3	2.78	2.93	3.63	3.21	2.2
Leader System	12	18	18	22	0.60	3.40	73.7	18	69	248	62.7	0.96	0.79	0.52	1.43	11.9
Xerox Industries	03	27	16	21	0.80	3.02	21.1	45	75	142	70.7	1.42	1.28	2.57	2.34	20.9
TRUCKING & SHIPPING																
GROUP AVERAGE		**25**	**19**	**17**	**0.63**	**2.28**	**24.2**	**22**	**60**	**116**	**85.5**	**0.58**	**1.57**	**2.60**	**2.25**	**19.8**
Alexander & Baldwin	12	26	15	13	0.88	3.45	46.2	15	44	138	47.6	2.50	1.93	2.85	2.23	3.6
American President	12	34	31	10	0.60	1.78	14.6	72	94	95	80.0	-3.46	3.31	5.48	3.72	24.5
Carolina Freight	12	19	19	27	0.60	3.12	6.6	48	54	51	60.9	0.35	0.71	0.22	1.44	14.6
Consolidated Freightways	12	13	16	NM	0.00	0.00	35.0	10	69	162	116.8	-1.16	-1.44	NA	1.02	67.6
CTX	12	23	31	6	1.20	5.16	19.4	-9	77	139	64.5	3.61	3.69	5.64	3.44	4.4
Hunt (J. B.) Transport Services	12	27	9	20	0.28	1.06	23.1	52	31	51	48.1	1.28	1.30	1.45	1.65	4.8
Preston	12	7	15	18	0.00	0.00	5.8	-22	41	36	148.6	-3.26	0.36	0.35	0.93	35.5
Roadway Services	12	52	22	17	1.20	2.30	39.0	37	64	213	85.2	3.05	3.07	3.69	3.64	4.9
Yellow Freight System	12	26	17	22	0.94	3.69	28.1	-4	67	161	117.6	2.31	1.18	1.12	2.16	18.5
UTILITIES & POWER																
INDUSTRY AVERAGE		**31**	**21**	**16**	**1.75**	**5.52**	**106.0**	**12**	**44**	**261**	**44.2**	**1.88**	**2.36**	**2.67**	**2.62**	**7.0**
ELECTRIC, WATER & COGENERATION																
GROUP AVERAGE		**32**	**22**	**13**	**1.88**	**5.63**	**129.0**	**18**	**42**	**279**	**40.1**	**2.00**	**2.60**	**2.55**	**2.76**	**5.2**
Allegheny Power System	12	45	31	12	3.16	7.06	54.0	23	40	242	34.6	3.61	3.67	3.51	3.77	2.1
American Electric Power	12	32	23	11	2.40	7.59	184.5	13	31	393	34.4	2.65	2.76	2.93	2.92	4.1
American Water Works	12	24	18	10	0.86	3.64	30.8	48	47	106	16.9	1.85	2.35	2.09	2.42	1.7
Baltimore Gas & Electric	12	33	26	13	2.10	6.39	84.2	19	47	287	34.4	1.64	2.59	2.01	2.74	5.5
Carolina Power & Light	12	50	30	11	3.04	6.11	80.4	7	35	314	27.7	3.16	4.37	3.71	4.39	4.3
Interior Energy	12	19	20	11	1.60	8.53	139.3	5	26	141	33.8	1.90	1.77	1.49	1.81	7.2
Central & South West	12	52	30	13	2.92	5.67	94.1	17	53	423	32.2	3.79	3.97	3.72	..16	2.2
Cincinnati Gas & Electric	12	37	28	10	2.48	6.66	56.2	35	44	208	44.6	4.12	3.57	4.47	3.60	6.1
CMS Energy	12	18	15	9	0.48	2.67	79.8	-36	68	159	68.0	-6.07	1.97	3.92	2.13	21.1
Commonwealth Edison	12	42	30	14	3.00	7.19	212.5	20	51	505	44.6	0.22	2.99	0.71	3.83	8.1
Consolidated Edison Co. of N. Y.	12	26	20	11	1.86	7.15	228.3	10	27	386	40.1	2.34	2.38	2.51	2.40	3.3
Detroit Edison	12	34	19	10	1.88	5.61	147.0	19	36	323	32.8	3.26	3.45	3.44	3.54	4.2
Dominion Resources	12	56	37	13	3.56	6.31	104.2	21	44	371	34.9	4.38	4.40	4.41	4.56	1.8
Duke Power	12	31	20	12	1.72	5.53	204.4	3	44	392	29.7	2.40	2.55	2.69	2.67	2.6
Energy	12	28	23	11	1.40	5.02	181.0	22	74	329	46.7	2.44	2.45	2.54	2.58	3.5
Florida Progress	12	45	29	13	2.84	6.35	54.9	24	35	253	31.1	3.50	3.40	3.38	3.58	2.8
FPL Group	12	35	19	13	2.40	6.93	163.7	21	43	438	44.6	-2.86	2.66	2.81	2.81	2.8
General Public Utilities	12	26	21	10	1.50	5.85	110.8	13	63	242	48.0	2.51	2.53	2.98	2.60	2.3
Gulf States Utilities	12	10	18	16	0.00	0.00	108.1	-8	65	129	54.2	-0.99	0.62	0.41	0.84	19.0
Houston Industries	12	41	28	13	2.96	7.18	129.2	13	58	420	55.7	2.67	3.13	2.71	3.27	4.0
Illinois Power	12	23	20	21	0.00	0.00	75.6	42	62	114	37.8	-1.53	1.09	0.76	1.98	16.2
Long Island Lighting	12	25	20	11	1.70	6.94	111.4	15	52	198	52.3	2.26	2.32	2.37	2.41	3.3
New England Electric System	12	31	22	12	2.08	6.63	65.0	27	35	225	43.6	4.11	2.64	2.93	2.75	4.7
New York State Electric & Gas	12	28	22	11	2.12	7.71	63.2	7	33	173	38.7	2.48	2.42	2.53	2.55	3.1

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INVESTMENT OUTLOOK SCOREBOARD

COMPANY	FY	RECENT SHARE PRICE	BOOK VALUE PER SHARE	P-E RATIO 1991 EST	1991 DIVIDEND RATE	YIELD %	SHRS OUT. MILS.	1991 MARKET VALUE CHANGE %	INSTITUTIONAL HOLDINGS %	INSTITUTIONAL HOLDINGS NUMBER	1991 TURNOVER %	EARNINGS PER SHARE 1990 ACTUAL	1992 ESTIMATES 1991 ANALYST EST.	1992 ESTIMATES BASED ON 5-YEAR TREND	1992 ESTIMATES FROM ANALYSTS CONSENSUS	1992 ESTIMATES FROM ANALYSTS VARIATION %
Niagara Mohawk Power	12	18	16	12	0.64	3.66	136.1	33	59	239	54.5	0.30	1.50	0.76	1.66	4.8
Nipsco Industries	12	26	15	13	1.16	4.50	67.1	33	68	176	70.2	1.81	1.95	3.19	2.07	2.9
Northeast Utilities	12	23	17	11	1.76	7.74	111.1	15	31	194	36.3	1.94	1.99	1.74	2.00	3.0
Northern States Power	12	41	25	14	2.42	5.90	62.5	21	34	252	32.2	2.79	2.96	2.91	3.16	3.8
Ohio Edison	12	20	16	12	1.50	7.36	152.6	19	30	243	34.9	1.67	1.67	1.47	1.78	6.7
Pacific Gas & Electric	12	31	18	15	1.64	5.27	415.8	23	38	406	23.1	2.10	2.13	2.04	2.47	5.3
PacifiCorp	12	24	13	13	1.50	6.35	260.5	9	30	386	25.1	1.85	1.87	1.89	1.98	2.0
Pennsylvania Power & Light	12	50	30	12	3.10	6.25	75.7	14	28	232	18.1	3.95	4.12	4.52	4.22	1.7
Philadelphia Electric	12	24	18	12	1.30	5.36	218.7	36	35	289	37.7	0.07	2.08	0.41	2.20	4.5
Pinnacle West Capital	12	16	19	14	0.00	0.00	87.0	60	49	112	45.7	0.81	1.16	0.53	1.45	17.9
Potomac Electric Power	12	23	15	12	1.56	6.78	108.1	22	21	230	40.5	1.62	1.90	1.77	1.99	4.5
Public Service Co. of Colorado	12	26	18	11	2.00	7.66	55.9	16	34	150	54.6	2.49	2.38	2.57	2.33	5.2
Public Service Enterprise Group	12	28	21	11	2.12	7.50	225.9	11	37	394	33.9	2.56	2.59	2.87	2.65	2.6
San Diego Gas & Electric	12	44	24	13	2.80	6.35	56.2	−1	17	155	34.1	3.52	3.46	3.47	3.50	2.6
SCEcorp	12	46	26	12	2.72	5.93	218.5	21	33	514	28.3	3.60	3.69	3.84	3.80	1.6
Southern	12	31	22	12	2.14	6.82	315.7	13	31	443	32.6	1.91	2.64	2.24	2.83	2.5
Texas Utilities	12	41	30	12	3.00	7.38	209.0	18	66	533	60.9	4.40	3.48	3.72	3.68	7.9
Union Electric	12	36	21	12	2.24	6.27	102.1	20	39	233	41.2	2.74	2.97	2.77	2.94	3.7
Wheelabrator Technologies	12	28	8	25	0.00	0.00	82.9	42	34	187	29.7	0.60	1.11	1.19	1.35	3.0
Wisconsin Energy	12	37	21	13	1.86	4.99	67.4	18	35	256	38.6	2.77	2.85	3.04	3.03	2.6
Zurn Industries	03	35	20	14	0.88	2.54	12.5	0	44	148	72.3	2.46	2.43	3.00	3.01	10.0
(b) **GAS, OIL & TRANSMISSION GROUP AVERAGE**		**28**	**20**	**26**	**1.45**	**5.24**	**48.7**	**−3**	**47**	**215**	**54.2**	**1.60**	**1.77**	**2.98**	**2.24**	**11.5**
Arkla	12	15	9	23	1.08	7.45	116.5	−27	59	352	63.8	1.10	0.64	0.73	1.12	10.7
Atlanta Gas Light	09	35	20	17	2.04	5.83	23.7	17	21	117	23.0	2.02	2.07*	2.17	2.44	5.7
Brooklyn Union Gas	09	29	23	13	1.90	6.50	28.0	11	31	114	27.3	2.14	2.18*	2.42	2.47	3.2
Columbia Gas System	12	18	19	11	0.00	0.00	50.6	−61	48	248	155.4	2.21	1.67	2.06	2.05	37.1
Consolidated Natural Gas	12	41	21	21	1.88	4.56	87.1	−5	41	376	24.0	1.91	1.97	1.94	2.62	8.4
Eastern Enterprises	12	27	23	14	1.40	5.21	22.5	−1	72	165	49.1	2.77	1.96	3.27	2.57	5.8
Enron	12	73	33	20	2.60	3.57	50.6	33	52	352	41.9	3.52	3.72	12.60	4.46	12.1
Enserch	12	15	11	30	0.80	5.25	65.1	−24	71	222	56.3	1.03	0.51	3.05	0.98	22.4
MCN	12	24	14	15	1.64	6.94	24.1	11	41	118	38.1	1.38	1.57	1.21	2.11	5.2
National Fuel Gas	09	24	18	15	1.46	6.08	30.8	9	23	108	22.6	1.83	1.63*	1.78	1.95	7.2
Nicor	12	45	24	12	2.24	5.03	29.0	1	52	246	45.5	3.86	3.84	4.66	4.18	2.9
Pacific Enterprises	12	24	23	12	1.76	7.22	72.4	−36	29	236	43.3	−0.86	2.05	2.86	2.32	9.5
Panhandle Eastern	12	15	11	19	0.80	5.20	107.3	45	52	259	60.4	−2.63	0.82	NA	1.00	12.0
Peoples Energy	09	27	18	13	1.72	6.49	32.8	12	45	193	23.8	2.07	2.05*	2.15	2.38	4.6
Sonat	12	34	28	18	2.00	5.82	42.9	−27	64	292	64.8	2.59	1.93	2.36	2.45	9.0
Southwest Gas	12	11	16	9	0.70	6.15	20.4	−12	21	68	60.0	1.81	1.20	1.47	1.35	16.3
Transco Energy	12	20	17	183	0.60	2.98	30.7	−37	48	176	111.5	0.53	0.11	NA	1.44	28.5
Williams	12	35	25	17	1.40	4.06	41.6	34	71	233	65.2	1.58	2.02	2.92	2.49	6.0

ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard catgory under which it is listed

A

Abbott Laboratories **12d**
Adia Services **16e**
Advanced [illegible] **4**
Advo-System **2c**
Aetna Life & Casualty **[illegible]**
Affiliated Pubs. **20b**
Ahmanson (H.F.) **17c**
Air & Water Techs. **21c**
Air Express Intl. **23c**
Air Products & Chemicals **4**
Airborne Freight **23c**
Alaska Air Group **23a**
Albany International **15d**
Alberto-Culver **6d**
Albertson's **10c**
Alco Standard **5**
Alcoa **16a**
Alexander & Alex. **17a**
Alexander & Baldwin **23d**
Allegheny **17a**
Allegheny Ludlum **16b**
Allegheny Power **24a**
Allergan **12b**
Allied Signal Techsystems **15a**
Allied-Signal **5**
[illegible] **2b**
[illegible]
[illegible]
[illegible] **11b**

America West **23a**
American Brands **6e**
American Cyanamid **4**
American Electric **24a**
American Express **17a**
American Family **17b**
American General **17b**
American Greetings **14d**
American Home **12b**
American Intl. Group **17b**
American National **17b**
American President **23d**
American Stores **10c**
American TV **20a**
American Water **24a**
Ameritech **[illegible]**
Ametek **9c**
Amgen **12b**
Amoco **11b**
AMP **9d**
AMR **23a**
Anacomp **18a**
Analog Devices **9d**
Anheuser-Busch **6c**
Aon **17b**
Apple Computer **18b**
Applied Materials **15c**
Archer Daniels **10b**
Arco Chemical **4**
Argonaut Group **17b**
Arkla **24b**
Armco **16b**
Armstrong World **6b**
Arrow Electronics **21b**
Arvin Industries **2b**
Asarco **16c**
Ashland Oil **11b**
Asset Investors **13b**
AST Research **18b**
AT&T **22a**
Atlanta Gas Light **24b**
Atlantic Richfield **11b**
Automatic Data **18c**
AutoZone **8**
Avery Dennison **15a**
Avnet **21b**
Avon Products **6d**
Avondale Industries **23c**
Aztar **14c**

B

Baker Hughes **11c**
Ball **7a**
Bally Mfg. **14c**
Baltimore G&E **24a**
Banc One **3b**
Bandag **2c**
Bank of Boston **3a**
Bank of New York **3a**
BankAmerica **3d**
Bankers Trust New York **3a**
Banta **21d**
Bard (C.R.) **12d**
Barnett Banks **3c**
Baroid **11c**
Bausch & Lomb **12d**
Baxter International **12d**
Bear Stearns **17a**
Bearings **21b**
Beckman Instruments **9c**
Becton, Dickinson **12d**
Bell Atlantic **22b**
BellSouth **22b**
Bemis **7b**
Beneficial **17a**
Bergen Brunswig **12a**
Berkshire Hathaway **17a**
Best Buy **6b**
Bethlehem Steel **16b**
Betz Laboratories **4**
Beverly Enterprises **12c**
Bindley Western **12a**
Black & Decker **15b**
Block (H&R) **17a**
Blockbuster Ent **14b**
Boatmen's Bancshares **3b**
Bob Evans Farms **14a**
Boeing **1**
Boise Cascade **19a**
Borden **10b**
Bowater **19b**
Briggs & Stratton **15c**
Bristol-Myers Squibb **12b**
Broad **17a**
Brooke Group **6e**
Brooklyn Union Gas **24b**
Brown Group **6a**
Brown-Forman **6c**
Browning-Ferris **21c**
Bruno's **10c**
Brunswick **14d**
Burlington Coat Factory **8**
Burlington Northern **23b**
Burlington Resources **11b**
Butler Mfg. **21a**

C

C&S/Sovran **3c**
Cabot **4**
Caesars World **14c**
Caldor **8**
CalFed **17c**
Campbell Soup **10b**
Capital Cities/ABC **20a**
Capital Holding **17b**
Cardinal Distribution **12a**
Carlisle **15a**
Carnival Cruise Lines **14d**
Carolina Freight **23d**
Carolina Power **24a**
Carpenter Tech. **16b**
Carter Hawley Hale **8**
Carter-Wallace **12b**
Casey's General **10c**
Caterpillar **15c**
CBI Industries **11c**
CBS **20a**
CDI **21e**
Centel **22b**
Centerior Energy **24a**
Centex **13b**
Central & South West **24a**
Champion Intl. **19b**
Charming Shoppes **8**
Chase Manhattan **3a**
Chemed **6d**
Chemical Banking **3a**
Chemical Waste **21c**
Chesapeake **19b**
Chevron **11b**
Chiquita Brands **10b**
Chrysler **2a**
Chubb **17b**
Cigna **17b**
Cincinnati Bell **22b**
Cincinnati G&E **24a**
Cincinnati Milacron **15b**
Circuit City Stores **6b**
Circus Circus **14c**
Citicorp **3a**
Clark Equipment **15b**
Clorox **6d**
CMS Energy **24a**
CNA Financial **17b**
Coast Savings **17c**
Coastal **11b**
Coca-Cola **6c**
Coca-Cola Enterprises **6c**
Colgate-Palmolive **6d**
Columbia Gas **24b**
Comcast **20a**
Comdisco **18c**
Comerica **3b**
Commerce Clearing **20b**
Commercial Metals **16b**
Commodore Intl. **18b**
Commonwealth Ed. **24a**
Commtron **14b**
Compaq Computer **18b**
Computer Associates **18c**
Computer Sciences **18c**
ConAgra **10b**
Conner Peripherals **18b**
Conseco **17b**
Consolidated Edison **24a**
Cons. Freightways **23d**
Cons. Natural Gas **24b**
Consolidated Papers **19b**
Consolidated Rail **23b**
Consolidated Stores **8**
Constar International **7a**
Continental Airlines **23a**
Continental Bank **3b**
Continental Corp. **17b**
Control Data **18b**
Cooper Industries **9a**
Cooper Tire & Rubber **2**
Coors (Adolph) **6c**
CoreStates Financial **3c**
Corning **15a**
Costco Wholesale **8**
CPC International **10b**
Crane **15a**
Cray Research **18b**
Crestar Financial **3c**
Crown Central **11b**
Crown Cork & Seal **7a**
Crystal Brands **6a**
CSX **23b**
Cummins Engine **2b**
Curtice-Burns Foods **10**
Cyprus Minerals **16c**

D

Dana **2b**
Danaher **15b**
Data General **18b**
Dayton Hudson **8**
Dean Foods **10b**
Deere **15c**
Dell Computer **18b**
Delta Air Lines **23a**
Delta Woodside **15d**
Deluxe **18a**
Detroit Edison **24a**
Dexter **4**

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ALPHABETICAL LIST OF COMPANIES

The number following each company name identifies the Scoreboard catgory under which it is listed

Continued from p. 192

Dial **5**
Diamond Shamrock **11b**
Dibrell Brothers **6e**
Digital Equipment **18b**
Dillard **8**
Dime Savings Bank **17c**
Disney (Walt) **14b**
Dixie Yarns **15d**
Dole Food **10b**
Dollar General **8**
Dominion Resources **24a**
Donnelley (R R) **21d**
Dover **15c**
Dow Chemical **4**
Dow Jones **20b**
Dresser Industries **11c**
Drug Emporium **12a**
DSC Communs. **22a**
Du Pont **4**
Duke Power **24a**
Dun & Bradstreet **20b**
Duracell International **15a**
Durr-Fillauer Medical **12a**
Dynatech **18b**

E

E-Systems **9b**
Eagle Food Centers **10c**
Eastern Enterprises **24b**
Eastman Kodak **14d**
Eaton **2b**
Echlin **2b**
Ecolab **6d**
Edison Brothers **8**
Edwards (A. G.) **17a**
EG&G **21a**
Egghead **18a**
Electronic Data **18c**
Emerson Electric **9a**
Engelhard **4**
Enron **24b**
Enserch **24b**
Entergy **24a**
Equifax **17a**
Equitable of Iowa **17b**
ESCO Electronics **9c**
Ethyl **4**
Exxon **11b**

F

Fairchild **15a**
Family Dollar Stores **8**
Fay's **12a**
Federal Express **23c**
Federal Home Loan **17a**
Federal Natl. Mtg. **17a**
Federal Paper Board **7b**
Fe[illegible]ogul **2b**
Ferro **[illegible]**
FHP Inter[illegible]ed **12c**
Fieldcrest [illegible] **16d**
Figgie Internati[illegible]
Fingerhut **8**
First Amer. Financial **[illegible]**
First Bank System **3b**
First Brands **15a**
First Chicago **3b**
First City Bancorp. **3d**
First Fidelity **3a**
First Financial Mgmt **17a**
First Interstate Bancorp **3d**
First Mississippi **4**
First of America Bank **3b**
First Union **3c**
Firstar **3b**
Fleet/Norstar **3a**
Fleetwood Ents **14d**
F[illegible] **10a**
Flor[illegible]ogress **24a**
Flowers Industries **10b**
Fluor **21a**
FMC **15c**
Food Lion **10c**
[illegible]or **2a**
Foster Wheeler **21a**
Foundation Health **12c**
Freeport McMoRan **4**
Fruit of the Loom **6a**
Fuller (H B) **4**
Fuqua Industries **5**

G

Gannett **20b**
Gap **8**
GATX **23d**
Gaylord Container **7b**
Geico **17b**
GenCorp **1**
General Cinema **5**
General Dynamics **1**
General Electric **5**
General Mills **10b**
General Motors **2a**
General Public Uts. **24a**
General Re **17b**
General Signal **15c**
Geneva Steel **16b**
Genlyte Group **9a**
Genuine Parts **21b**
Georgia Gulf **4**
Georgia-Pacific **19b**
Gerber Products **10b**
Giant Food **10c**
Gibson Greetings **14d**
Gillette **6d**
Gitano Group **6a**
Glatfelter (P. H.) **19b**
Glenfed **17c**
GM Hughes Electronics **9b**
Golden West **17c**
Goodrich (B.F.) **4**
Goodyear Tire & Rubber **2c**
Goulds Pumps **15c**
Grace (W.R.) **4**
Grainger (W.W.) **21b**
Granite Construction **21a**
Great A&P **10c**
Great Lakes Chemical **4**
Great Western **17c**
Grumman **1**
GTE **22b**
Guilford Mills **15d**
Gulf States Utilities **24a**

H

Halliburton **11c**
Handleman **21e**
Hanna (M. A.) **4**
Hannaford Brothers **10c**
Harley-Davidson **14d**
Harman International **14d**
Harnischfeger **15c**
Harris **9b**
Harsco **15a**
Hartford Steam **17b**
Hartmarx **6a**
Hasbro **14d**
Hechinger **8**
Heinz (H. J.) **10b**
Helene Curtis Industries **6d**
Hercules **4**
Hershey Foods **10b**
Hewlett-Packard **18b**
Hi[illegible]land **15a**
Hi[illegible] **12c**
Hilton [illegible] **14c**
Holly **11b**
Home Dep[illegible]
Home Shopp[illegible]
HomeFed **17c**
Homestake Mining **16c**
HON Industries **18a**
Honeywell **9c**
Hormel (Geo. A.) **10b**
Household International **5**
Houston Industries **24a**
Howell **21b**
Hubbell **9a**
Hudson Foods **10b**
Huffy **14d**
Humana **12c**
Hunt (J. B.) **23d**
Huntington Bancshares **3b**

I

IBM **18b**
IBP **10b**
ICF International **21c**
ICH **17b**
Illinois Central **23b**
Illinois Power **24a**
Illinois Tool Works **15a**
IMC Fertilizer **4**
Imo Industries **9c**
Imperial Holly **10b**
Independent Ins. **17b**
Ingersoll-Rand **15c**
Ingles Markets **10c**
Inland Steel **16b**
Inspiration Resources **4**
Intel **9d**
Intelligent Electronics **18a**
Interface **15d**
Intergraph **18c**
Interlake **15c**
International Flavors **6d**
Intl. Multifoods **10b**
International Paper **19b**
International Specialty **4**
Interpublic Group **21d**
Interstate Bakeries **10b**
Itel **5**
ITT **5**

J

Jacobs Engineering **21a**
James River **19b**
Jamesway **8**
Jefferson-Pilot **17b**
Johnson & Johnson **12d**
Johnson Controls **9c**
Jostens **15a**
JWP **21e**

K

Kmart **8**
Kaiser Aluminum **16a**
Kaman **21b**
Kansas City Southern **23b**
Karcher (Carl) **14a**
Kaufman & Broad **13b**
Kellogg **10b**
Kellwood **6a**
Kelly Services **21e**
Kemper **17b**
Kennametal **15b**
Kerr-McGee **11b**
KeyCorp **3a**
Kimball International **6b**
Kimberly-Clark **19b**
Knight-Ridder **20b**
Kroger **10c**

L

L. A. Gear **6a**
La-Z-Boy Chair **6b**
Ladd Furniture **6b**
Lafarge **13a**
Lancaster Colony **15a**
Lands' End **8**
Leggett & Platt **6b**
Leslie Fay **6a**
Leucadia National **17a**
Lifetime **12c**
Lilly (Eli) **12b**
Limited **8**
Lincoln National **17b**
Litton Industries **9b**
Liz Claiborne **6a**
Lockheed **1**
Loctite **4**
Loews **17a**
Lone Star Techs **16b**
Long Island Lighting **24a**
Longs Drug Stores **12a**
Longview Fibre **7b**
Loral **9b**
Lotus Development **18c**
Louisiana Land **11b**
Louisiana-Pacific **19a**
Lowe's **8**
LSI Logic **9d**
Lubrizol **4**
Lukens **16b**
Lyondell **4**

M

Magma Copper **16c**
MagneTek **9a**
Manor Care **12c**
Manufacturers Hanover **3a**
Manufacturers Natl **3b**
Manville **13a**
Mapco **11b**
Marion Merrell Dow **12b**
Mark IV Industries **15a**
Marriott **14c**
Marsh & McLennan **17a**
Marsh Supermarkets **10c**
Marshall Industries **21b**
Martin Marietta **1**
Masco **6b**
Masco Industries **2b**
Mattel **14d**
Maxtor **18b**
Maxus Energy **11b**
May Department Stores **8**
Maytag **6b**
McCaw Cellular **22a**
McCormick **10b**
McDermott Intl. **21a**
McDonald's **14a**
McDonnell Douglas **1**
McGraw-Hill **20b**
MCI Communications **22a**
McKesson **12a**
MCN **24b**
Mead **19b**
Medco Containment **12a**
Media General **20b**
Medtronic **12d**
Mellon Bank **3a**
Melville **8**
Mercantile Stores **8**
Merck **12b**
Meredith **20b**
Merisel **18a**
Merrill Lynch **17a**
Merry-Go-Round **8**
Meyer (Fred) **8**
MicroAge **18a**
Microsoft **18c**
Midlantic **3a**
Miller (Herman) **18a**
Millipore **9c**
Minnesota Mining **15a**
Mirage Resorts **14c**
Mitchell Energy **11b**
MNC Financial **3a**
Mobil **11b**
Modine Mfg. **2b**
Monsanto **4**
Morgan (J.P.) **3a**
Morgan Stanley **17a**
Morrison **14a**
Morrison Knudsen **21a**
Morton International **4**
Motorola **9b**
Multimedia **20a**
Murphy Oil **11b**

N

Nacco Industries **11a**
Nalco Chemical **4**
Nash Finch **10a**
Nashua **7b**
National City **3b**
National Fuel Gas **24b**
National Health **12c**
National Intergroup **5**
National Medical **12c**
National Semicond **9d**
National Service **9a**
Navistar International **2a**
NBD Bancorp **3b**
NCH **6d**
NCNB **3c**
Neiman Marcus Group **8**
Nerco **11a**
New England Electric **24a**
New York State E&G **24a**
New York Times **20b**
Newell **15a**
Newmont Gold **16c**
Newmont Mining **16c**
Niagara Mohawk **24a**
Nicor **24b**
Nike **6a**
Nipsco Industries **24a**
Nordstrom **8**
Norfolk Southern **23b**
Northeast Utilities **24a**
Northern States **24a**
Northern Trust **3b**
Northrop **1**
Norwest **3b**
Novell **18c**
Nucor **16b**
NWNL **17b**
Nynex **22b**

O

Occidental Pet. **11b**
Office Depot **21b**
Ogden **5**
Ohio Edison **24a**
Old Republic **17b**
Olin **4**
Olsten **21e**
Omnicom Group **21d**
Oracle Systems **18c**
Orion Capital **17b**
Orion Pictures **14b**
Oryx Energy **11b**
Outboard Marine **14d**
Owens & Minor **12d**
Owens-Corning **13a**
Oxford Industries **6a**

P

Paccar **2a**
Pacific Enterprises **24b**
Pacific G&E **24a**
Pacific Telecom **22a**
Pacific Telesis Group **22b**
PacifiCare Health **12c**
PacifiCorp **24a**
PaineWebber Group **17a**
Pall **5**
Panhandle Eastern **24b**
Paramount Comms. **14b**
Parker Hannifin **15a**
Penn Central **5**
Penney (J. C.) **8**
Pennsylvania Power **24a**
Pennzoil **11b**
Pentair **15c**
Peoples Energy **24b**
Pep Boys **8**
PepsiCo **6c**
Perini **13b**
Perkin-Elmer **9c**
Perry Drug Stores **12a**
Petrie Stores **8**
Pfizer **12b**
Phelps Dodge **16c**
PHH **23c**
Philadelphia Electric **24a**
Philip Morris **6e**
Phillips Petroleum **11b**
Phillips-Van Heusen **6a**
PHM **13b**
Pic 'N' Save **8**
Pier 1 Imports **6b**
Pinkerton's **21e**
Pinnacle West **24a**
Pioneer Financial **17b**
Pioneer Hi-Bred **10b**
Pitney Bowes **18a**
Pittston **11a**
PNC Financial **3a**
Polaroid **14d**
Pope & Talbot **19a**
Potlatch **19b**
Potomac Electric **24a**
PPG Industries **13a**
Precision Castparts **16c**
Premark International **5**
Premier Industrial **21b**
Preston **23d**
Price **8**
Primerica **17a**
Procter & Gamble **6d**
Progressive **17b**
Promus **14c**
Provident Life **17b**
PS Co. of Colorado **24a**
Public Service Ent. **24a**

Q

Quaker Oats **10b**
Quaker State **11b**
Quanex **16b**
Quantum **18b**
Quantum Chemical **4**
QVC Network **8**

R

Ralston Purina **10b**
Raychem **9a**
Raytheon **9b**
Readers Digest **20b**
Reebok International **6a**
Reliance Group **17b**
Republic New York **3a**
Reynolds & Reynolds **18a**
Reynolds Metals **16a**
Rhone-Poulenc Rorer **12b**
Riser Foods **10c**
Rite Aid **12a**
RJR Nabisco **6e**
Roadway Services **23d**
Rochester Telephone **22b**
Rockwell International **5**
Rohm & Haas **4**
Rohr Industries **1**
Rose's Stores **8**
Ross Stores **8**
Rouse **13b**
RPM **13a**
Rubbermaid **15a**
Ruddick **10c**
Russell **6a**
Ryder System **23c**
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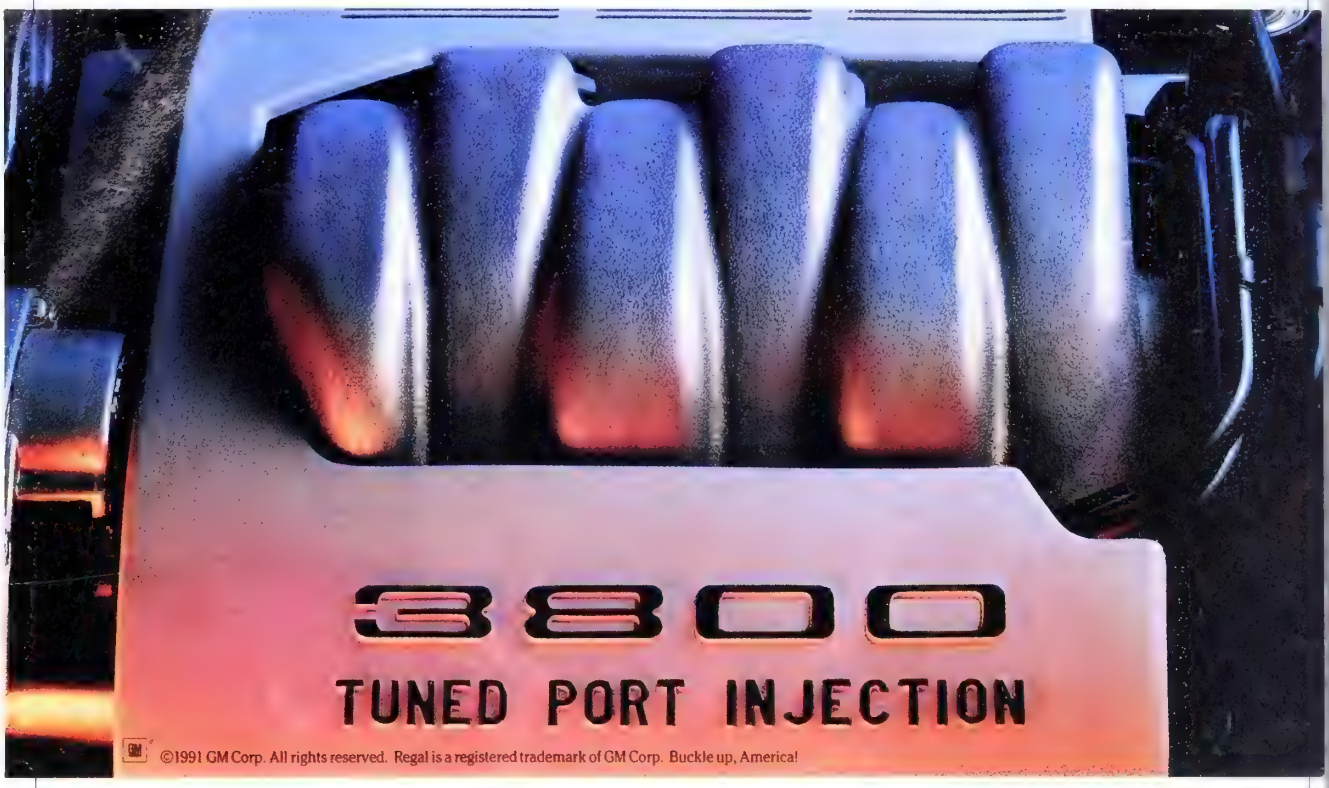

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	Horse-power	Torque	EPA Est MPG City	Hwy
3.1-litre V-6 with MFI	140	185	19	30
3800 V-6 with tuned-port injection*	170	220	19	28

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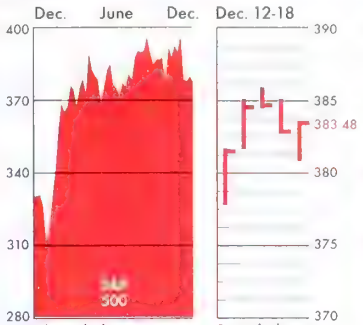
vestment Figures of the Week

ENTARY

as arrived a little early. The t gift went to Japanese in-. For the week ended Dec. long-suffering Tokyo market ded over 1,100 points, or The Dow industrials picked rly 50 points on Dec. 11 and ping to send the average ver 2900. Even after a small k, the Dow was up 1.5% for ek. The broader U.S. market s performed equally well. e tools took top honors as rforming industry group. t be a harbinger of a better ny in 1992?

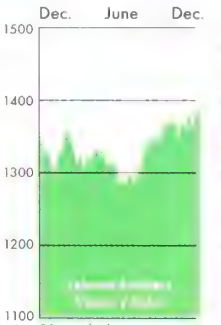
STOCKS



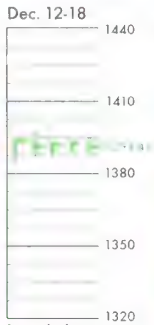
52-week change **+16.1%**

1-week change **+1.5%**

BONDS

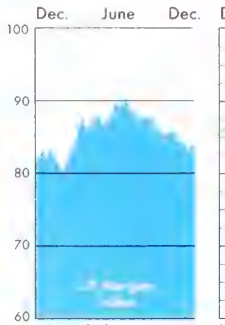


52-week change **+4.4%**

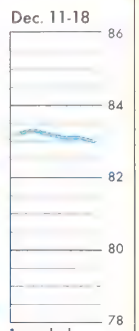


1-week change **+0.3%**

THE DOLLAR



52-week change **+1.3%**



1-week change **−0.2%**

RKET ANALYSIS

STOCKS	Latest	% change Week	% change 52-week
ONES INDUSTRIALS	2908.1	1.5	10.7
MPANIES (Russell 1000)	202.8	1.5	18.4
COMPANIES (Russell 2000)	177.4	1.5	35.8
MPANIES (Russell 3000)	215.6	1.5	19.3

ON STOCKS	Latest	% change (local currency) Week	% change (local currency) 52-week
N (FINANCIAL TIMES 100)	2413.6	1.4	10.8
(NIKKEI INDEX)	22,629.9	5.2	−12.5
TO (TSE COMPOSITE)	3332.6	−0.6	2.4

FUNDAMENTALS	Latest	Week ago	Year ago
90-DAY TREASURY BILL YIELD	4.22%	4.24%	6.8%
30-YEAR TREASURY BOND YIELD	7.76%	7.81%	8.2%
S&P 500 DIVIDEND YIELD	3.21%	3.25%	3.6%
S&P 500 PRICE/EARNINGS RATIO	21.4	21.0	15.1

TECHNICAL INDICATORS	Latest	Week ago	Reading
S&P 500 26-week moving average	384.6	384.4	Negative
Stocks above 26-week moving average	39.9%	38.9%	Neutral
Speculative sentiment: Put/call ratio	0.49	0.47	Positive
Insider sentiment: Vickers sell/buy ratio	1.86	2.07	Positive

USTRY GROUPS

BRIDGE INFORMATION SYSTEMS INC.

-WEEK LEADERS	% change 4-week	% change 52-week	Strongest stock in group	% change 4-week	% change 52-week	Price
HINE TOOLS	16.4	4.0	CINCINNATI MILACRON	27.0	−3.6	10
LTH CARE SERVICES	10.8	63.1	ALZA	15.1	94.6	90 ½
T DRINKS	9.7	43.5	COCA-COLA	11.4	57.4	74 ¾
LUTION CONTROL	9.1	7.0	WASTE MANAGEMENT	10.0	12.0	39 ¾
METICS	9.0	44.4	GILLETTE	11.7	59.8	48 ¾
-WEEK LAGGARDS	**% change 4-week**	**% change 52-week**	**Weakest stock in group**	**% change 4-week**	**% change 52-week**	**Price**
URE TIME	−15.0	16.2	HANDLEMAN	−25.2	3.2	12 ¼
ELS AND MOTELS	−14.8	−1.2	MARRIOTT	−17.4	7.5	14 ¼
ALS	−13.7	−1.9	ASARCO	−19.5	−27.1	19 ⅛
MESTIC OIL	−13.3	−19.4	SANTA FE ENERGY RESOURCES	−31.2	−46.7	8
AND GAS DRILLING	−11.2	−42.3	HELMERICH & PAYNE	−13.6	−32.1	18 ¼

TUAL FUNDS

MORNINGSTAR INC.

ERS

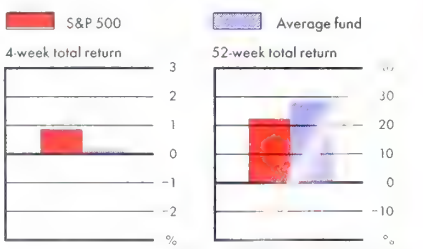
eek total return	%
MANAGED SECTORS	9.6
LIFETIME MANAGED SECTORS	9.5
NTIETH CENTURY GROWTH INVESTORS	7.7

k total return	%
PENHEIMER GLOBAL BIO-TECH	111.0
ERICAN HERITAGE	86.1
M CAPITAL DEVELOPMENT	84.2

LAGGARDS

Four-week total return	%
METLIFE-STATE STREET GLOBAL ENERGY	−16.6
FIDELITY SELECT ENERGY SERVICE	−11.6
STRATEGIC SILVER	−10.1

52-week total return	%
FIDELITY SELECT ENERGY SERVICE	−23.3
USF&G EUROPEAN EMERGING COMPANIES	−16.3
METLIFE-STATE STREET GLOBAL ENERGY	−15.8



LATIVE PORTFOLIOS

DATA RESOURCES INC

r amounts
sent the present
of $10,000
ed one year ago
h portfolio

ntages indicate
ay total returns

U. S. stocks	Treasury bonds	Foreign stocks	Money market fund	Gold
$12,134	**$11,335**	**$11,295**	**$10,527**	**$9,645**
+1.28%	+0.33%	+2.17%	+0.09%	−3.44%

on this page are as of market close Wednesday, Dec. 18, 1991, unless otherwise indicated. groups include S&P 500 companies only; performance and share prices are as of market close Dec. 17. Mutual fund returns are as of Dec. 13. Relative portfolios are valued as of Dec. 17. A more detailed explanation of this page is available on request.

THE ECONOMY: NO HALF MEASURES, PLEASE

If the word from Washington is correct, Congress and the President will return after New Year's and begin to argue about the best way to jump-start the ailing U. S. economy. At the end of their labors, they will have produced a package of assorted tax cuts and tax increases providing a net stimulus of $10 billion to $15 billion, peanuts in a $5 trillion economy. Because they will have broken their vow not to undo last year's budget agreement, they'll spend the rest of the year trying to convince the public that they did the right thing.

It's an all-too-familiar script, and it's time to junk it. If Congress and the Administration plan to break last year's budget agreement, they ought to do it the right way for the right reasons. This economy has short-term strains and long-run problems, and the politicians' myopia is putting undue emphasis on the former. It is past time that the lawmakers focus on the latter.

The remedies needed to cure the near-term pain are fairly obvious: The economy is in a cyclical slump, and monetary ease is still the best medicine. The Fed should keep pushing short-term rates down, and hope that recent increases in the money supply finally feed into the real economy, giving consumption a boost and getting production humming again. If not, another interest rate reduction may be called for.

Yet even Alan Greenspan seems to realize that's not enough to make the economy spring back to life. The reason is that the economic problems aren't merely cyclical in nature. When one company after another announces permanent layoffs, it's clear the U. S. economy is undergoing a severe "structural readjustment," as economists like to say. Many things are happening at once: Debt burdens are being unloaded, asset prices are being marked down, service i dustries are shrinking, and manufacturers are still hurtir thanks to global overcapacity. As if that weren't enough, i comes are stagnating, poverty is rising, and almost everyor seems to be pedaling up an increasingly steep hill.

Structural adjustment must occur to ensure more ba anced and sustainable growth over time. But it is proving drawn-out and painful process. Government can ease the pr cess. Instead of offering a $15 billion grab bag of tax cut Congress and the Administration should fashion a lon term growth package that injects at least $50 billion into tl economy over two or three years. Through credits, subsidie and other kinds of incentives, such a package should e courage the rebuilding of America's infrastructure, fro roads and bridges to the educational system. The obje would be to coax individuals and businesses toward inves ing for the long haul. An investment tax credit could rewa businesses for investment over and above historical norm An education tax credit might help the unemployed to ga new skills and employed persons to upgrade existing skil New block grants to states and cities might let them tail infrastructure spending to specific problems.

Such leadership, however, may be too much to expect Congress and the Administration in 1992. But here's a re sonable wish for the new year—that America's politicia look beyond November. This is no time for Christmas-tr bills with something for everyone, or for pandering to sp cial interests. Today Europeans grope toward a unified f ture while the republics of the former Soviet Union a remaking their world. It's time for some new thinking Washington, too.

HAIL GORBACHEV—AND FAREWELL

For a man who so dramatically changed the world, the ming moments of Mikhail Gorbachev's authority are a edy of classical dimensions. The new country that he m e possible is being born without him. The Russian Rep lic plans to move into the Kremlin by Jan 1. It is ironic tha he new commonwealth really has no role for Gorbachev, who as been told by his chief political rival, Boris Yeltsin, that he'd better resign within a month. Not to worry, Yeltsin adds, Gorbachev will be respected and long remembered. So long, *do svidanya.*

Short shrift indeed for the statesman who's had the most impact on world history since World War II. In a scant ven years, Gorbachev transformed a decaying totalitarian sy m into a nascent democracy, ended the cold war, cut short his country's misguided adventure in Afghanistan, cracked open the Berlin Wall, and let Eastern Europe go without a fight. The last Soviet leader has his flaws, to be sure. He never could shed his Communist *apparatchik* upbringing or grasp that his beloved socialism had to trashed completely. His choice of aides oscillated between t brilliant (Eduard Shevardnadze) and the disastrous (Valent Pavlov). But his astonishing accomplishments far outwei these frailties.

The sad truth is that the time has come for Gorbachev go. Westerners may fret over the security of Soviet nucle weapons or the rise of militant Islamics in Central Asian r publics. Nonetheless, after a period of hard readjustment, is just possible that a vast, resource-rich commonwealth about 300 million well-educated people will emerge. One the world's largest retrograde markets may prove to be m itarily nonaggressive and technologically innovative. As t region struggles to respond to the immense changes now u der way, the West should do whatever it can to help t new commonwealth's peoples bring its possibilities into l ing. That would be the most glorious tribute to the deeds Mikhail Gorbachev.

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